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# East Europe Report

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28 JULY 1986

## EAST EUROPE REPORT

### CONTENTS

#### ECONOMY

#### INTERNATIONAL AFFAIRS

- Active Romanian Participation in CEMA Cited  
(Alexandru Dragut; ERA SOCIALISTA, 25 Apr 86)..... 1

#### GERMAN DEMOCRATIC REPUBLIC

- Relative Buying Power of Mark Compared to D-Mark in 1985  
(DIW WOCHENBERICHT, 22 May 86)..... 13
- Economists Analyze Aspects of Production Preparation-Phase  
(Wolfgang Heyde, et. al.; WIRTSCHAFTSWISSENSCHAFT, Vol 34,  
No 5, May 86)..... 30
- Economists Discuss Recent Improvements in Export Structure  
(Thomas Soisson, Ellen Meyer; WIRTSCHAFTSWISSENSCHAFT,  
Vol 34, No 4, Apr 86)..... 51
- Potsdam Soon To Commence Production of Industrial Diamonds  
(Roland Tittel; TRIBUENE, May 86)..... 59
- New Measures Allocate Industrial-Academic Research Funds  
(Franz Hoche, Richard Klar; WIRTSCHAFTSRECHT, Vol 17,  
No 2, 1986)..... 61

## POLITICS

### INTERNATIONAL AFFAIRS

ATA Attacks Yugoslav Conferences on Albania (ATA, 19 Jun 86).....	75
--	----

### ALBANIA

ATA on Gorbachev's 'Demagogical' Disarmament Proposals (ATA, 18 Jun 86).....	78
---	----

Alia Speech at Tirana Youth Rally (Ramiz Alia; ZERI I POPULLIT, 7 Jun 86).....	79
---	----

#### Briefs

Marko Meets Greek Parliamentarian	87
Cami Receives Spanish Marxist-Leninists	87
New Envoy to Sweden	87
New Ambassador to Kuwait	88

### POLAND

Kubiak Queried on Political Role, 'Failures,' 9th, 10th Congresses (Hieronim Kubiak Interview; POLITYKA, 21 Jun 86).....	89
---	----

Philosophy Journal Charged With Shortchanging Marxism (Tadeusz Jaroszewski; MYSL MARKSISTOWSKA, No 2, Mar-Apr 86).....	95
--	----

### ROMANIA

New Books Analyze Contemporary Religious Phenomena (I.N. Rosca; ERA SOCIALISTA, 25 Apr 86).....	101
--	-----

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ECONOMY

INTERNATIONAL AFFAIRS

#### ACTIVE ROMANIAN PARTICIPATION IN CEMA CITED

Bucharest ERA SOCIALISTA in Romanian No 8, 25 Apr 86 pp 22-26

[Article by Alexandru Dragut: "Active Participation by Romania in Technical and Scientific Cooperation within the Framework of CEMA]

[Text] The period which has elapsed since the 9th Party Congress has been a fertile one for development of science and technology in Romania at new levels of quality. Considering the extremely important role played by science in economic and social development of the country, the party has assigned to science functions, responsibilities, and material and human resources in harmony with a direct production process promoting progress in all sectors of life and work of the nation. The party leadership, and Comrade Nicolae Ceausescu personally, devote the greatest attention to scientific research, technological development, and technical advances, closely coordinated with the programs and plans for economic and social development of the country and with education and the requirements of production. This represents a definitive trait of the last four 5-year plans, the objective of a policy consistently and efficiently pursued by the party and state.

Under the direct leadership of Comrade Elena Ceausescu, academician, doctor, and engineer, chairwoman of the National Council of Science and Education, Romanian scientific research has taken action constantly to assure implementation of the provisions of the master plan of scientific research, scientific development, and introduction of technical progress over the 1981-1985 period and the principal guidelines extending to the year 2000, ensuring active participation by the central institutes and academies of science, scientific research, technological research, planning and design, and production units, and by specialists in higher education in fulfillment of the tasks assigned to research in all sectors and spheres of economic and social activity.

Application of the results of scientific research over the 1981-1985 period has resulted in introduction into production of more than 6,300 new and improved technologies. A substantial contribution has been made to better utilization of raw materials, reduction of material and energy consumption, especially in chemistry, metallurgy, machinebuilding, electrical engineering and electronics, extractive industry, construction materials, light industry, etc. Introduction of the new technologies and of around 1,700 mechanization and automation systems has contributed to an increase of more than 50 percent in labor productivity in national industry. Production of more than

17,000 new types of machinery, equipment, apparatus, and plants possessing improved characteristics began over the 1981-1985 period. Consequently, the percentage of new and modernized products manufacture of which began during this 5-year plan was in 1985 more than 46 percent of the commodity output of the process sectors of national industry. Outstanding accomplishments have been recorded in important sectors of the national economy. Original Romanian development and design have made a decisive contribution to renovation of production. In chemistry and petrochemistry, for example, this contribution is more than 98 percent, more than 95 percent in machinebuilding, electronics, and electrical engineering, and 100 percent in the construction materials industry and light industry.

In agriculture, scientific research has made an important contribution to increase in the production potential of the soil, to creation of new varieties of high-yield seeds and plants which are more resistant and take less time to ripen and of livestock breeds with high production potential, to application of new and more efficient technologies for feeding livestock, etc.

To ensure increasingly vigorous growth of science and technology in Romania, the party has, especially over the last 20 years, promoted a firm policy of developing the material resources of research and of providing a greater number of specialists in this important sector of activity. While 50,000 persons were employed in research in 1955, by 1985 this number had risen to more than 200,000. Fixed assets in the research sector increased more than fivefold over this period, and outlays for research were multiplied more than 14 times the 1961-1965 amount during the 1981-1985 5-year plan. Significant material effort to support research is also planned during the 1986-1990 5-year plan.

#### A Broad Program for Development of National Science and Technology

The development of material resources and manpower has been accompanied by ongoing action to improve the organizational structures and the research network. The basic trend is toward increasingly intimate integration of research with education and production.

The 13th Congress of the Romanian Communist Party has established the trends and the content of a new and decisive stage in implementation of the program for creating a well-rounded socialist society and advancing Romania toward communism. Marking out the path of transition to a new quality in all sectors of activity, the Directives of the 13th Party Congress set forth the guidelines for the program of scientific research, technological development, and introduction of technical progress over the 1986-1990 period, as an integral part of these directives.

At the 1st Science and Education Congress held in November 1985, an event of great significance in the political and scientific life of Romania and one exerting a profound influence on all activities dedicated to attainment of the objectives established by the 13th Congress of the PCR [Romanian Communist Party], an analysis was made of the work done in this sphere, and the scientific research and technological development program drawn up under the direct guidance of Comrade Elena Ceausescu was adopted. The congress decided at the same time to institutionalize the integration of scientific research, technological development, and the educational process by creating

the National Council of Science and Education, a political body of high deliberative and decision-making authority simultaneously endowed with broad executive powers exercised through the National Committee for Science and Technology and the Ministry of Education. The Congress appointed Comrade Elena Ceausescu, academician, doctor, engineer, member of the Executive Political Committee of the Central Committee of the PCR, and first deputy prime minister, as chairwoman of the National Council of Science and Education. This is fresh evidence of the special attention which the party leadership devotes to science and education as factors of decisive importance in successfully creating a well-rounded socialist society and advancing Romania toward communism.

The chief provisions of the program of scientific research, technological development, and introduction of technical progress include more rapid development of domestic sources of raw materials and intermediate products and energy and fuel resources, intensification of technological research in the sector of chemistry and petrochemistry, creation of new systems of machinery and equipment of modern, modular, and multi-purpose design marked by extensive use of electronic devices. An important direction of the program is represented by development of agriculture on a modern basis in order to obtain high, dependable, and stable yields regardless of variations in climatic factors. Particular attention will be devoted to combining applied research with basic research in mathematics, physics, chemistry, biology, and other fields. Romanian science will thus increase the contribution it makes both to implementation of the provisions of the current 5-year plan and to securing reserve technical solutions for solving the problems of economic and social development of the country in the future. Improvement in the quality of life, closely coordinated with the economic and social progress of the country, will also be ensured. On the basis of the contribution made by science and technology, the rate of growth of labor productivity will be increased and substantial elevation of the technical and quality level of products will be ensured. Steps will also be taken to improve the efficiency of investment activities through application of modern structural solutions.

Attainment of the fundamental objectives provided in the program of scientific research, technological development, and introduction of technical progress will lead to continued heightening of the role of science and technology as a directly productive force and a factor stimulating the entire economic and social development of the country and raising Romania to newer heights of progress and civilization.

Along with the material and human effort exerted by Romania--a decisive factor in reaching the objectives set by the party in the area of science and technology, economic and technical-scientific cooperation with the socialist countries and with other countries throughout the world has made, and continues to make, an increasingly important contribution in this direction.

#### Widening and Intensification of Romanian International Technical-Scientific Cooperation

The comprehensive, steady development of our national economy and of science and technology, in keeping with the requirements of the new technical and scientific revolution, has made it possible and necessary constantly to extend economic, scientific, and technological relations with the socialist



countries and with other countries, and for Romania to participate increasingly in world trade.

It is Romania's belief, that of President Nicolae Ceausescu, that the widening and intensification of international technical and scientific cooperation should be progressively more consonant with the needs of rapid growth and modernization of production forces. They should facilitate transfer of technology and free access to the achievements of contemporary science and technology and should make an ever greater contribution to utilization of the strength of Romanian scientific creativity and to balanced development of the Romanian economy.

Romanian participation in the international exchange of science and technology has progressively intensified, as has also provision at the national level for vigorous development of scientific research, technological development, and introduction of technical progress. The results achieved in these areas have made Romanian research and technological engineering institutes highly competitive in relations with specialized institutes and commercial firms in other countries. In 1965, Romania maintained technical and scientific cooperation relations with 28 countries; the number of countries with which technical and scientific cooperation relations have been established currently exceeds 75. Romania cooperates in science and technology with all the socialist countries, more than 40 developing countries, and the majority of the developed capitalist countries of Europe, North America, and Asia.

Over the period from 1965 to 1985, the number of cooperation projects in the area of science and technology between Romania and other countries has increased 7-fold, and export of products, technologies, licenses, know-how, technical assistance, and other services in the research and development sector has risen more than 6-fold. It should be pointed out that at the beginning of the period in question Romania had a negative net technological exchange balance, but this balance has progressively been greatly improved, so that substantial changes were made of the 1965-1985 period in the direction of equilibrium, and under the 1981-1985 5-year plan the balance in effect became positive, considering the accomplishments actually made.

Active Romanian participation in the international division of labor and in exchange of scientific and technological assets is consistently based on the principles governing the country's foreign policy, the foundation of which is respect for national sovereignty and independence, full equality of rights, non-interference in domestic affairs, and mutual advantage.

Collaboration and cooperation with the socialist countries occupies a prominent position in the overall international technical and scientific cooperation relations of Romania. These cooperation relations have been constantly developed and improved, in proportion to the balanced economic and social development of the countries committed to the course of creating and consolidating the new social order. The cooperation among the socialist countries has received the benefit of the conditions which socialism creates for assertion of the national essence and personality of the peoples, rapprochement and cooperation among the nations, independent and sovereign socialist countries enjoying equality of rights.

Scientific and technological collaboration and cooperation between Romania and the socialist countries assumes a variety of forms. Relations are both bilateral, in which case cooperation is accomplished especially through the intermediary of joint subcommissions on technical and scientific collaboration, and multilateral, when it is accomplished within the framework of CEMA and other specialized international organizations. Many central authorities and economic and technical-scientific organizations of the respective countries participate in these activities.

#### Stages of Technical and Scientific Cooperation within CEMA

Technical and scientific cooperation was initiated in 1949 when the Council of Economic Mutual Assistance, CEMA, was created, with Romania as one of the founding members of this international organization. It has undergone significant changes over the years, both from the viewpoint of content and as regards the specific forms of embodiment. At first oriented predominantly toward advanced exchange of experience in the technical and scientific sphere and that of production, and toward exchange of the technical documentation needed for rebuilding the national economies of these countries, after 1965 technical and scientific cooperation activities assumed new forms of organization, chief among which was coordination of the most important scientific research of mutual interest. This form contributed greatly to broadening mutual exchange of information and knowledge of the directions of scientific research and technical progress in the CEMA member countries.

An important factor in extension of mutual economic and technical-scientific cooperation was adoption of the integrated program for progressive intensification of cooperation within the framework of CEMA, which was adopted in Bucharest in 1971.

Considering the need for coordinating their efforts in development of science and technology by cooperating in solving important problems of mutual interest in economic, scientific, and technological development, the CEMA member countries reached agreement in the integrated program on the chief directions, forms, and methods of technical and scientific cooperation and on the principles that were to govern the conduct of these relations among the countries.

Over the period which has elapsed since adoption of the integrated program, significant results have been achieved in implementation of the program's measures relating to technical and scientific cooperation. The CEMA member countries have over these years concluded a substantial number of conventions and agreements incorporating technical and scientific cooperation programs on the basis of which many research cooperation projects have been carried out in a variety of organizational forms, such as joint laboratories, temporary international groups, scientific and production associations, and economic associations which also engage in technical and scientific cooperation activities, and other forms in which technical and scientific cooperation is organized.

Through its economic organs, research and development institutes, and the industrial centrals and enterprises concerned, Romania participates in cooperation activities under more than 200 conventions and agreements covering chiefly cooperation programs in areas of importance to the national economy,

such as development of raw materials and energy resources and better utilization of such resources, including minerals with a low useful substance content; wider use of new energy sources in the economy; development of new types of machinery, equipment, and plants, as well as new types of materials and substitutes; creation of new technologies ensuring reduced consumption of materials, fuels, and energy in production processes; recovery and reuse of raw materials and intermediate products; use of nuclear technology and energy in the economy; wide use of computers; basic and applied research in chemistry, physics, and biology; etc.

The cooperation activities conducted under the conventions and agreements to which Romania is a party have yielded positive results for the national economy. These results are given concrete expression especially in lowering of research and development costs; shortening of the research period as a result of division of labor with partners based on joint work programs, this leading to prompter application of technical and scientific results in the economy; elimination of imports of documentation and creation of conditions for expanding exports; etc. At the same time, these activities have contributed to significant extension of cooperation between Romanian research and development organizations, centrals, and industrial enterprises and similar organizations in the CEMA member countries. This has facilitated exchange of experience in science and technology, mutual information regarding accomplishments in different areas of research and development, etc.

While the technical and scientific collaboration activities conducted following adoption of the integrated program are to be rated on the whole as positive, it should nevertheless be noted that the progress of the activities has been for the most part extensive in nature. The range of topics in technical and scientific cooperation within the framework of CEMA in 1985 was especially broad, comprising virtually all the current directions of scientific research and technological development extant throughout the world.

Because technical and scientific cooperation has been extensive in nature, the efficiency of cooperation, despite the results obtained, is still below the level of the technical and scientific potential of the CEMA member countries and the cooperation potential afforded by existing conventions and agreements for faster completion of the research and development projects of mutual interest specified in these documents. Considerable margin also exists with respect to potential improvement in organization of technical and scientific cooperation. Immediate action should be taken to eliminate duplication of effort in organization and conduct of technical and scientific cooperation activities, reduce the still lengthy period lapsing between the signing of conventions and agreements and actual commencement of cooperation between partners, link technical and scientific cooperation more closely to economic cooperation, and for this purpose carry out more cooperation programs in an integrated cycle of research, development, production, and marketing, and more widely promote contractual forms between partners in connection with execution of research projects of mutual interest in cooperation. The pertinent working bodies coordinating cooperation within the framework of conventions should concentrate their attention on completing the research projects specified in the programs agreed upon and eliminate from their activities many secondary questions relating to the organization of cooperation. Such questions often make no real contribution to increase in the efficiency of cooperation.



## Further Intensification of Technical and Scientific Cooperation

The high-level economic conference of CEMA member countries held in June 1984, to the initiation, preparation, and conduct of which Romania made an important contribution, thoroughly analyzed the status and results of economic and technical-scientific cooperation among these countries and established the main directions of further development and intensification of this cooperation. It created prospects for raising mutually advantageous cooperation within the framework of CEMA to a higher level, for the sake of faster development of the national economies of the member countries and enhancement of the force and prestige of socialism throughout the world.

Agreement was reached at the conference on the most important objectives on which the cooperation activities of the member countries are currently centered. Along with the array of measures adopted to promote development of cooperation in various fields--such as development of raw materials, fuels, and energy resources, metallurgy, agriculture and the food industry, etc--and to step up cooperation and specialization in production to a significant extent, especially in sectors of cardinal importance such as machinebuilding and chemistry, measures were simultaneously established for intensifying technical and scientific cooperation.

In this context, considering the need for rapid modernization of the respective national economies, that is, prompt transition to intensive development, the conference set the Council of Economic Mutual Assistance the task of drawing up an integrated program of technical scientific progress for the CEMA member countries for a period of 15 to 20 years, on the basis of national programs. Consequently, an integrated program of technical and scientific progress for the CEMA member countries to the year 2000 was adopted and signed at the head-of-state level at the 41st extraordinary CEMA meeting held in December 1985. This program is to provide a basis for further development and intensification of long-term technical and scientific cooperation among these countries.

As is known, a number of other technical and scientific cooperation programs have been agreed upon over the years, such as programs for solving fuel and energy problems to the year 2000, building instruments and equipment for scientific research and automation of experiments, and ensuring rational use of natural resources in the context of environmental protection. The program adopted at the December 1985 CEMA council meeting is very important in that it provides a suitable basis for coordinating the efforts of the CEMA member countries in cooperation to carry out the activities agreed upon in connection with creation and utilization of leading-edge technologies in the current priority directions of development of science and technology leading to technical progress, such as development of alternative energy sources, especially long-term sources, creation of new materials and technologies, introduction of electronic devices and integrated automation of production processes in order to optimize these processes and thereby lower energy, fuel, and material consumption, and faster development of biotechnological applications in industry, agriculture, and health care.

The primary aims of organizing cooperation in these priority directions of scientific and technological development are solution of the problems of accelerating economic and social progress in the participating countries, at

least doubling the productivity of social labor in the CEMA member countries by the year 2000, and substantially reducing the specific consumption of energy, raw materials, and intermediate products per unit of national income.

Cooperation conventions and agreements will be concluded to implement the provisions of the program, and if necessary the conventions currently in effect will be worked out in greater detail. In the process of elaboration and refinement of cooperation conventions, including those relating to specialization and cooperation in production, account will be taken of the provisions of the program and of the need for better use of available production facilities in the member countries, and for this purpose fuller exploitation of the current technical-scientific and economic potential of the countries. Taking this step provided in the program will in effect create the most favorable conditions in these countries for reaching with maximum efficiency the goals of technical progress set in this document.

The program also calls for broad exchange of information among the member countries on the results of existing scientific research projects and technologies, so that these projects and technologies may be put to use as promptly as possible in the member countries concerned. Such activities can make an important contribution to creation of greater possibility for participating in the attainment of these goals.

The cooperation activities provided in the program will be conducted on the basis of cooperation agreements between the economic and technical-scientific bodies and organizations concerned in the member countries. The activities are to be financed out of the national resources of the individual countries. The possibility is also provided of using credit from the International Investment Bank and the International Bank of International Cooperation to carry out projects, as well as joint funds established by the member countries concerned, in stipulated cases and on the basis of conventions and agreements.

Of particular importance is the provision according to which the program will represent the basis for technical and scientific cooperation within the framework of CEMA and will contribute to broad development of cooperation and specialization in production. This provision ensures implementation of the program in accordance with the principles laid down in the CEMA Statute and in other regulatory documents of this organization. This will permit application of practically tested forms, procedures, and methods of collaboration and immediate transition to execution of the actions recorded in the program.

Mention should also be made of the provision of the program whereby each CEMA member country has the right at any time to express an interest in participating in various activities recorded in the document in question, on terms to be agreed upon with the participating countries. This provision once again emphasizes the democratic nature of cooperation within the framework of CEMA and of the relations of a new type established between the socialist countries.

In the same context is the statement to the effect that CEMA member countries which do not participate in a particular project specified in the program are entitled to receive the technical and scientific results, on terms



agreed on with the countries which do take part in the project. Along with its economic function, a provision such as this is also of great political importance, especially in the context of the current international situation, inasmuch as it clearly distinguishes the policy of the socialist countries from that of the capitalist countries in an area as topical and controversial throughout the world as that of free and unimpeded transfer of the results of research, with no restrictions whatever.

The program is an open-end document; it can be periodically added to and refined, on the basis of proposals by the CEMA member countries, with the most recent accomplishments of science, technology, and production throughout the world taken into account so as to ensure permanent coordination of the program's provisions with the economic and social development needs of the participating countries.

Another important provision deserving to be mentioned is the one to the effect that the CEMA member countries may steadily further extend cooperation with other socialist non-members of CEMA, on the basis of implementation of the program. This is in harmony both with the national interests of the countries participating in the program and with the general interests of socialism. The possibility of developing technical and scientific cooperation with the developing countries and with other countries in the world is also extended.

The open nature of the program, which is mentioned explicitly in its provisions, should be emphasized in another connection as well. The CEMA member countries are prepared to coordinate their actions relating to implementation of the program with other interested countries, on the basis of equality of rights and on mutually acceptable terms. In addition, the program reaffirms the conviction that it is necessary to impart a global character to international technical and scientific cooperation, and expresses the desire of its signatories to make a major contribution to elaboration and implementation of a unified global program in this sphere. Through these provisions, a resolute position is adopted toward the imperialist circles which promote a policy of prohibition and discrimination in the sphere of technology transfer. The CEMA member countries act steadfastly to further normalization and development of relations in the area of economy, science, and technology, elimination of all restrictions and artificial barriers, elimination of underdevelopment, and establishment of a new international economic order.

The open nature of the program is also demonstrated by the principles that are to underlie the implementation of its provisions. These are the principles set forth in the CEMA Statute, the integrated program of further intensification of cooperation adopted at the 1971 CEMA meeting, and the documents of the June 1984 high-level conference of CEMA member countries, and established in accordance with the provisions of the United Nations Charter and the final act of the conference on security and cooperation in Europe.

#### Active Romanian Participation

Through its competent bodies, research and development units, and scientists

and other specialists, Romania has taken active part in all stages of elaboration of the program, making an important contribution along with the other CEMA member countries to the preparation of this document.

Considering the provisions of the national program of research and development and introduction of technical progress under the 1986-1990 5-year plan and over the 1991-2000 period as approved by the 13th Congress of the PCR, the party and state have directed that the Romanian research and production units concerned participate as widely as possible in carrying out the projects included in the program adopted at the December 1985 CEMA meeting that are similar in subject matter and the execution of which by way of cooperation can contribute directly to attainment of the objectives of the national research program.

As Comrade Nicolae Ceausescu pointed out at the Science and Education Congress, "to carry out the cooperation programs within the framework of CEMA, we must also participate actively in carrying out the integrated program in the area of research and technology." The competent Romanian authorities and Romanian research and production units have taken action in this direction, declaring themselves interested in cooperating in nearly all the projects under the program. At the same time, the Romanian side has declared itself through its specialized organizations to be interested in assuming the role of coordinator of cooperation for carrying out projects under the program.

The program was approved at the 27 December 1985 meeting of the Executive Political Committee of the PCR Central Committee, along with a program of measures for fulfillment of the commitments made by the Romanian side for the sake of the most efficient possible implementation of the provisions of this important document. In his address delivered on this occasion, Comrade Nicolae Ceausescu discussed at length the importance of adopting the program, and provided guidelines for action by the ministries, other specialized central authorities, central institutes, and research and production units participating in implementation of the provisions of the program. "I believe," stated the party secretary general, "that the general goals of the program are especially important and that we must--as moreover we resolved to do when we adopted the program in question--do everything we can to ensure that these goals are reached in the most efficient way possible."

As Comrade Nicolae Ceausescu pointed out, particular attention must be devoted in carrying out the program primarily to solving the problems of energy, raw materials, and creation of new materials possessing superior characteristics, increasing agricultural output and simultaneously raising the technical level of machinery and equipment, and automation and robotization of equipment and production processes. In this connection, the party secretary general stated that "it is my feeling that the integrated program as well is based rather on the question of what we will use to turn out production than on that of what we will primarily produce; after all, robots or automation are not ends in themselves. We must proceed on the basis of fundamental problems, and these problems are sources of energy and raw materials, to which are to be added the problems of agriculture and agricultural production." At the same time, answering the question of the machinery which we must use to reach the goals set, old machinery or new machinery, robots or other forms of automation, Comrade Nicolae Ceausescu stated

that "I believe that in our programs we must aim at solving the basic problems, energy and raw materials, and also at elaboration of new technologies leading to reduction of consumption and to better utilization."

In the light of this statement, the main obligation of the ministries, other Romanian specialized central authorities, and research and production units participating in cooperation within the framework of the program is to continue to act responsibly and do everything to make certain that the results obtained in the context of cooperation are introduced into production promptly. In this way as well, research will increase the contribution which it makes to better utilization of raw materials, intermediate products, and energy and fuel resources in the Romanian national economy. Participation by technical-scientific and production organizations in cooperation to implement the program will at the same time create new possibilities for intensifying their cooperation relationships with similar units in other countries.

Because of its provisions and the methods and mechanism of implementation advocated, the program adopted by the December 1985 CEMA meeting represents an important document which, in keeping with the resolutions of the June 1984 high-level conference of the CEMA member countries, ensures transition in technical and scientific cooperation to an intensive stage of development in some areas of cooperation, one of deeper specialization and cooperation in production, an activity more and more directly linked to the results obtained in the sphere of technical and scientific cooperation. The adoption of this program represents a new step in the direction of implementing the measures for development in several areas of the economic and technical-scientific cooperation established at the high-level economic conference. At the same time, Romania believes that it is entirely possible to reach all the goals set at the conference in question, and especially those relating to solution of problems in the area of energy and raw materials, and to revise the conventions on specialization and cooperation in production, on the basis of the current economic and technical-scientific potential of the member countries and the need for the fullest possible utilization of the production facilities of these countries. This would provide some of the most favorable conditions for carrying out the program. "We are resolved," stated Comrade Nicolae Ceausescu, "to act with the utmost steadfastness to implement the programs established by the high-level conference on economic problems and the CEMA resolutions to achieve better utilization, rational use of production facilities, elevation of the technical and quality level of production, and the most efficient possible satisfaction of energy, raw materials, and other needs within the framework of CEMA. We are also resolved to take active part in the integrated program of research and technical progress so as to satisfy the needs of the socialist countries in this area as well and accomplish rapid development of our countries, on the basis of the most advanced technology."

Being deeply interested in broadening, improving, and increasing the efficiency of technical and scientific cooperation with the CEMA member countries, Romania has acted and will continue to act to develop and deepen these relations. In the practical activities it has engaged in, Romania has always striven in particular for effective and highly efficient coordination of the efforts of the participating countries, including those based on contracts, to solve important problems of scientific research and technological

development of mutual interest which play a major role in economic development, in introduction of technical progress and renovation of sectors of the economy, in orientation of development and intensification of technical and scientific cooperation in the direction of increased contribution to speeding up the process of bringing closer together and progressively equalizing the economic development levels of the CEMA member countries, in promoting methods and a style of work within the CEMA bodies permitting elimination of duplication of effort from technical and scientific cooperation activities in carrying out cooperation projects, of repetitious elements in their examination, and purely formal aspects, including those involved in the initiation of cooperation conventions and agreements--all these factors being subordinated to the major criterion of increase in the efficiency of cooperation activities and avoidance of needless expenditures of materials, human effort, and time.

The experience gained thus far in scientific and technological cooperation between Romania and the other CEMA member countries, the valuable results achieved in various areas, and the great potential that exists for development, intensification, and increase in the efficiency of this activity, to the mutual advantage of all the member countries, justify the conviction that the relationships of cooperation in the sphere of science and technology between Romania and these countries will continue to intensify, both bilaterally and within the framework of the Council of Economic Mutual Assistance.

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ECONOMY

GERMAN DEMOCRATIC REPUBLIC

RELATIVE BUYING POWER OF MARK COMPARED TO D-MARK IN 1985

West Berlin DIW WOCHENBERICHT in German Vol 53 No 21/86, 22 May 86  
pp 259-68

[Article: "The Purchasing Power Ratio of D-Mark and GDR Mark in 1985"]

[Text] For about 50 years, comparisons of purchasing power have been made by national offices of statistics and international organizations. The GDR has never been included in any of these projects. For this reason, DIW--for the past 35 years--has been doing studies at irregular intervals to determine the relative buying power of the D-Mark as compared to the Mark of the GDR. The last such comparison was made for the year 1983. (Footnote 1) (Compare: "Das Kaufkraftverhaeltnis zwischen D-Mark und Mark der DDR 1983." Heinz Vortmann and Cord Schwartau in WOCHENBERICHT DES DIW, No 17/1984, p 193 ff.)

Determining consumer parities is somewhat problematical, particularly if it is done between areas in which there is considerable divergence in the supply and consumption structure, price pattern, level and distribution of income, availability of goods, etc. Without a doubt, such differences impair the indicative value of consumer parities. However, the differences between the two German states are not so great as to make a comparison meaningless. "In this respect,...international organizations are... considerably less squeamish in their comparisons of purchasing power than DIW." (Footnote 2) (Wolfgang Stinglwagner: "Noch einmal deutsch-deutsche Kaufkraftvergleiche: Haben sie einen Sinn?" In: DEUTSCHLAND ARCHIV, Cologne, No 3/1985, p 276)

Buying power analyses aim at determining conversion factors which will permit a comparison of nominal values given in the various national currencies. Consumer parities by themselves are not indicators of prosperity, not even their changes over a period of time. Comparative statements about the level and development of the standard of living can be made only in conjunction with the level of income or private consumption, for example.

In principle, exchange rates are unsuitable for conversion since they are determined by the price level of goods and services exchanged in foreign trade and by capital transactions. For the consumer, however, the domestic price of goods and services is significant. With regard to the Mark in the GDR, the circumstances are quite different; it is purely a domestic currency and inconvertible so that it is not listed on

international foreign exchange markets. In addition to the exchange rate for tourists (1 Mark = 1 D-Mark) set more or less arbitrarily by GDR authorities, there exists only the exchange rate offered by private exchange bureaus in the West (1985: 1 Mark = 0.20 DM). This exchange rate is useless for a comparison of buying power. (Footnote 3) (The exchange rate..."is also valid on the GDR 'black market' and corresponds in many cases to the price ratio of Intershop and Delikat/Exquisit. The exchange rate is the result of supply and demand of both currencies in partial markets. The demand of GDR citizens for D-Marks for purchases at Intershop and in the West is much higher than West German demand for Marks, among other reasons because the GDR goods supply is not very attractive to West Germans, and because of strict export bans. In addition, the exchange rate is distorted by a 'risk premium' [GDR embargo on import and export of its own currency]. The following example demonstrates how senseless it would be to use the exchange rate of exchange bureaus in order to compare private consumption: accordingly, private per capita consumption in the GDR in 1983 would only be 11 percent of the level in the FRG..." --Heinz Vortmann and Cord Schwartau: "Zur Berechnung von Verbrauchergeldparitaeten zwischen D-Mark und Mark der DDR." In: DEUTSCHLAND ARCHIV, Cologne, No 1/1985, p 42)

#### On the Method of Calculating Purchasing Power

Although the previous comparison of the buying power of the D-Mark and the Mark of the GDR found approval in many places, it also provoked some criticism. (Footnote 4) (Compare the discussion in the DEUTSCHLAND ARCHIV. Gernot Schneider: "Hat die Ermittlung innerdeutscher Verbrauchergeldparitaeten einen Sinn?" In: DEUTSCHLAND ARCHIV, Cologne, No 7/1984. Heinz Vortmann and Cord Schwartau: "Zur Berechnung von Verbrauchergeldparitaeten zwischen D-Mark und Mark der DDR," op. cit. Wolfgang Stinglwagner: "Noch einmal deutsch-deutsche Kaufkraftvergleiche: Haben sie einen Sinn? op. cit.) The WOCHENBERICHT DES DIW aims at concise information and analyses. In principle, it is not suitable for detailed methodical discussions. But because of the irritation caused, the method chosen is to be treated here in some detail, although not all aspects can be dealt with.

There are several procedures to determine buying power ratios. The formulas by Laspeyres and Paasche are used frequently, also by the Federal Office of Statistics and DIW. (Footnote 5) (For more details on the method, see Charlotte Otto-Arnold: "Das Kaufkraftverhaeltnis zwischen D-Mark und Mark [DDR]. SONDERHEFTE DES DIW, No 129/1979) Accordingly, the following are included in the computation: prices for similar goods in both economic areas, and the respective composition of purchases according to goods and services. There is a parity for every pair of similar goods. In order to determine average values for certain types of goods, or for the consumption by social classes, out of the great many established ratios, individual parities are weighted. Since it is hardly possible to include all consumer goods in studies of purchasing power, representative consumption patterns ["shopping baskets"] (weighting systems) are compiled, whereby all merchandise

included is taken into consideration according to its share of consumption (or the consumption share of the type of merchandise it represents). Consumer parities are, therefore, price ratios weighted by shares of consumption. They express the ratio between the amount of money necessary in Country B and the amount to be spent in Country A for the same consumption; in other words: buying power parity shows how many monetary units would have to be expended in Country B for a certain amount of goods which would require expenditures of 100 monetary units in Country A (for example, DM 100 = ...Marks in GDR).

Differences between consumer parities in the course of time result from changes

- in prices (in one or both countries used for comparison),
- in consumption shares,
- in the composition of consumption patterns (in part, different goods).

Even in the case of stagnating or actually decreasing consumption in one country, and real consumption growth in the other country, consumer parities can change in favor of the lagging economic area. Increased consumer parities, therefore, cannot be equated with a (relative) improvement in private consumption.

With the exception of some special observations, the prices for goods for daily living in the FRG were taken from the extensive official price statistics and from mail-order catalogues; for the GDR, data from official statistics and other information--for example, from press reports--were evaluated.

A "true" price comparison is made more difficult by the fact that often, identical goods cannot be found. As far as possible, prices for similar goods were compared, but frequently there are differences in the material used, in workmanship, model, forming, and technical fittings. In such cases, if it seems justified, one must decide on the basis of the criterion of same intended use. Under these circumstances it is especially important to include the largest possible number of goods; differences in supply can thus be taken into account, and errors in ascertainment balanced to a large extent. A total of over 800 products were included in the computation; this is about the same number of items at present carried in the FRG cost of living index.

As in the past, the calculations were based on the consumption pattern of 4-person wage-earner households (Footnote 6) (In the FRG: 4-person wage earner household with medium income, head of household the sole earner. In the GDR: 4-person households of workers and employees with average household incomes.) and 2-person pensioner households. (Footnote 7) (In the FRG: 2-person households of pension and social security recipients. In the GDR: 2-person pensioner households with average household income without income from work.) The consumption pattern in the FRG and in the GDR were evaluated on the basis of DM prices as well as Mark prices.

The consumption structure in the FRG for both types of households were based on the weighting system of 1980, which is currently being used by the Federal Office of Statistics to compute the price index figures of the cost of living; (Footnote 8) (Compare "Waegungsschema der neuen Preisindizes fuer die Lebenshaltung auf Basis 1980." In: STATISTISCHES BUNDESAMT [editor]; [Fachserie 17, Reihe 7 Preise und Preisindizes fuer die Lebenshaltung]. Issue August 1984, p 67 ff. [appendix]) they were updated on the basis of the results of housekeeping accounts. (Footnote 9) (Compare STATISTISCHES BUNDESAMT [editor]: [Fachserie 15, Reihe 1 Einnahmen und Ausgaben ausgewaehlter privater Haushalte 1984], 1985) In addition, modifications were necessary in the case of some goods items, since comparable data for the GDR are not always available.

In contrast to the Federal Office of Statistics, the GDR Central Administration for Statistics does not publish clearly subdivided weighting systems. Only average consumption structures of private households are published in rough divisions. (Footnote 10) (Compare STATISTISCHES JAHRBUCH DER DDR 1985, p 283 ff.) A further subdivision was estimated on the basis of individual reports in GDR specialized literature, of consumption and supply statistics, and information on consumption trends and habits of the population.

Therefore, for each of the two types of households two calculations are carried out, one for the consumption pattern of the FRG, and one for that of the GDR. This is necessary because of the differences in consumption structures, and it results in divergent consumer parities. By establishing mean values (crossing the consumption patterns), the results can be compressed.

The partially different market conditions in the two comparison areas cannot be registered through comparisons of buying power. Supply problems are still part of everyday life in the GDR; to be mentioned are, for example,

- hidden quality defects,
- bottlenecks in making goods available,
- waiting periods (in the case of passenger cars, for instance, up to 10 years and longer),
- gray and black markets,
- barter deals,
- insufficient capacity in repair and service establishments.

#### Price and Consumption Structures

The comparison is carried out under the aspect of divergences from prices in the FRG. The price structure in the GDR shows great differences vis-a-vis that of the FRG. There are goods which, compared with the FRG, are particularly cheap, and others which are particularly expensive.

As a rule, uniform consumer goods prices are in force in the GDR; this principle is only set aside occasionally in the case of perishable goods



or special offers. Prices are established administratively, and social policy goals are being pursued to a certain degree. For this reason, in the case of many consumer goods one cannot speak of cost orientation. Consumption of vital goods and services such as basic foodstuffs, public transportation services, laundry services, and rents, is heavily subsidized. In general, even non-subsidized services are remarkably cheap because of relatively low wages. By contrast, luxury products are burdened with high consumption levies (indirect taxes). This includes the majority of technical products, in particular more durable consumer goods such as cars, television sets, and washing machines. The same holds true for most luxury foodstuffs. Prices fulfill a certain distribution function: they are to bring relief to the budget of lower-income groups, and cut back the buying power of higher-income groups. After all, the national budget in 1984 showed price subsidies of 32 billion Marks, housing not included, (1985 plan: 40 billion Marks; 1986 plan: 46 billion Marks), and 50 billion Marks of consumption levies.

Until the end of the 1970's, the GDR leadership was concerned with holding consumer goods prices at a constant level. There were hidden price increases, however, due to product changes: goods of lesser value disappeared from the assortment of merchandise, and with new or slightly altered products, price increases were greater than quality improvements.

Over-all, those price increases stayed within limits; they were not listed in the official GDR price statistics, and the official line maintained the fiction of unchanged consumer goods prices. (Footnote 11) (The official GDR index of retail sales prices remained almost constant at about 100 until the end of the 1970's.) Only at the end of the 1970's was the principle of constant consumer goods prices loosened: prices for products of basic requirements continue to remain stable, while new goods, and those of greater value, are to recover costs and bring in profits and taxes. Open price increases were permitted for newly costed products. This increased price differences in all types of merchandise. In addition, a special form of price increase is taking place through expansion of the Delicat/Exquisit stores. These are stores which sell qualitatively good products from (mostly Western) foreign countries, but also from domestic production, sometimes at three to four times the customary prices.

In the FRG, some consumer goods prices for important categories of goods rose significantly, particularly during the 1970's and the beginning of the 1980's (with the second oil price hike). Price increases have slowed considerably since then and have even come to a complete halt at present.

Thus there are some strongly divergent consumer goods prices in the two German territories; in extreme cases, the difference may be 10 times as high: public transportation fares in the GDR, for example, are barely one-tenth of those in the FRG, while digital watches are up to 10 times higher.

In addition to the differing price structures in the two countries (and resulting price ratios), the purchasing power of the currencies is also determined by the respective consumption structure of the households. For purposes of comparison, the consumption structures of the two states can be juxtaposed in three large categories of goods (foodstuff and luxury foods, industrial goods, services). This shows that, in both territories, pensioners--because of their lower incomes--spend proportionately more for food, luxury foods and services, and correspondingly less for industrial goods. Durable goods in household furnishings are usually of less importance to elderly citizens than non-durable goods and services. The proportion of expenditures for services (including repairs) in the GDR is less than half that in the FRG; this is primarily due to very low rents and highly subsidized prices for energy and transportation services, but also because of the limited and sometimes insufficient supply. On the other hand, the budget share for foodstuffs and luxury foods--for both household types--in the GDR is over 50 percent higher than in the FRG. GDR households also spend more of their income on industrial goods, particularly textiles, clothing, and shoes.

It can be noted in general that the consumption patterns in the FRG are much more diverse than in the GDR. This holds especially true for high-quality consumer goods, where the GDR still experiences supply gaps, long waiting lines, and considerable regional supply differences. The items sold in Exquisit/Delikat stores constitute only a limited proportion of GDR consumption; compared with sales of foodstuffs and luxury foods, and the category of textiles, clothing and shoes, they amount to only 10 percent of each category. This has been taken into account accordingly.

Price and Purchasing Power Ratios According to Areas of Requirements, Based on Consumption Habits in the FRG...

Purchasing power ratios were established for nine consumption areas and the two household types, based on consumption habits in the FRG. The 4-person, wage-earner household reflects approximately the average consumption structure, while the 2-person, pensioner household more strongly reflects basic, vital requirements.

There is a much wider price range for foodstuffs and luxury foods in the GDR than in the FRG. For foodstuffs, the prices for bread, baked goods, fresh vegetables and potatoes are one-half to two-thirds of comparable West German prices; fish, meat and lunch meats also cost less than in the FRG. But with increased quality, the price ratios shift in favor of the D-Mark. Butter and margarine cost as much as in the FRG; eggs, flour, processed vegetables and canned goods cost more. Prices for many imported goods such as tropical fruit, cocoa and chocolate are far above the Western level. Over-all it shows that foodstuffs, for which 100 D-Marks had to be paid in the FRG, would have required 99 or 102 Marks, respectively, in the GDR, depending on the type of household.

In the case of luxury foods, the purchasing power of the Mark is considerably lower. For wage earners it is 52 percent, for pensioners

only 42 percent of that of the D-Mark. This is primarily due to the very high prices in the GDR for coffee, wine and liquor. Coffee costs 4 times as much in the GDR as in the FRG; sparkling wines 3 times as much; and wine, liquor and better brands of tea, twice as much. Since consumption in lunchrooms and restaurants in the GDR continue to be remarkably inexpensive, the buying power of the Mark is twice that of the D-Mark. Only in luxury-type restaurants—still very rare in the GDR, but coming—are prices at about the average level of those in the FRG.

In the case of clothing, textiles and shoes, prices in the GDR are almost always higher than in the FRG. Medium-quality shoes, better-quality textiles, carpets and drapes cost twice or three times as much, and higher-quality items even more; work clothes, children's clothes and underwear, on the other hand, are cheaper. In this area, the buying power of the Mark is only about 40 percent that of the D-Mark.

Due to high subsidies, the expenditure sectors of apartment rents, electricity, gas, fuel are characterized by extremely low prices in the GDR. Compared to the FRG, rent expenditures are only 20 percent, and energy and gas only about 30 to 40 percent. Therefore, the purchasing power of the Mark in the case of rents is at least five times higher than that of the D-Mark, and for energy and fuels it is three and-a-half times as high.

The very heterogeneous area of household management includes, in addition to durable consumers goods (for example, furniture, heating and cooking appliances), lamps, china, glassware, and numerous articles for everyday use (such as nails, cleansers). Only simple goods, traditional tools and kitchen utensils are relatively inexpensive in the GDR, while most other merchandise is expensive. For example, furniture and electric household appliances cost two to five times as much as in the FRG. Compared to the D-Mark, the buying power of the Mark amounts to 54 percent in the case of wage earners, and to 63 percent for the simpler consumer patterns of pensioners.

The area of transportation and communication, in addition to individual transportation and use of public transportation services, also covers services such as car repair, driver training courses, rents for garages, and postal and telephone services. Due to high subsidies, fares in the public transportation system are very low in the GDR, while individual car use (with the exception of repairs) is much more expensive. Postal fees are more favorable in the GDR; local telephone calls from public phones cost the same in both states. Based on the West German consumer pattern, in the case of wage earners the buying power of the Mark is about 20 percent lower than that of the D-Mark. With pensioners, however, with relatively low use of privately owned vehicles, the Mark shows a 40 percent higher buying power.

Table 1

Buying Power Parities of D-Mark and GDR Mark in 1985<sup>1</sup>,  
Computed According to the Consumption Structure in the FRG for Selected Household Types  
in Percent

Expenditures according to categories	4-Person Wage Earner <sup>2</sup> Household		2-Person Pensioner <sup>3</sup> Household	
	Relative buying power of Mark	Percent of expenses	Relative buying power of Mark	Percent of expenses
Foodstuffs and luxury foods	89	26.6	87	32.3
of these: foodstuffs	99	17.8	102	23.9
luxury foods	52	5.3	42	5.2
consumption in restaurants	205	3.5	200	3.2
Clothing and shoes	43	7.7	41	5.9
Apartment rents	530	17.7	529	24.0
Electricity, gas, heating fuels	341	6.4	356	9.3
Household management	54	8.5	63	7.7
Transport and communications	79	15.6	140	8.1
Body and health care	92	2.6	121	3.6
Education and entertainment	59	7.9	71	4.5
Personal outfitting, other goods and services <sup>6</sup>	91	7.2	91	4.7
Cost of living, total	89	100.0	110	100.0
Cost of living, without rents	76	82.3	88	76.0

1) Mid-year position.— 2) Average of all 4-person, wage earner households with medium income of head of household as sole earner.— 3) Two-person households of pensioners and social security recipients.— 4) Purchasing power of the Mark in the GDR compared to the D-Mark in the FRG.— 5) Without services for health care.— 6) Watches, jewelry, leather goods, vacation and travels, insurance services, fees, motor vehicle taxes, etc.  
Source: Computations by DIW.



With regard to items of body and health care, articles for body care cost on the average 50 percent more in the GDR than in the FRG, while health care items cost considerably less. Depending on the consumption pattern, the purchasing power of the Mark is 92 percent of the D-Mark for wage earners, while it is about 120 percent for pensioners oriented more towards standard products.

The education and entertainment sector includes, for instance, radio, television and stereo sets, but also cameras and motion-picture equipment; compared with the FRG, they cost about five times as much in the GDR; optical equipment, about three times as much, sports and camping items and toys, about twice as much. For items of school and office use, prices in the GDR vary more than in the FRG. Stationery and paper products, printed material and services are much more favorable in the GDR; the price of daily newspapers is only 20 percent. Books continue to be cheaper; however, luxurious picture volumes are at about the West German price level. Visits to theaters, movie theaters, and sports events cost about half in the GDR; kindergarten fees are one-twentieth, and adult education costs one-fourth. Altogether, the buying power of the Mark compared to the D-Mark is 59 percent for wage earners, and 71 percent for pensioners.

Personal outfitting, in addition to watches and jewelry, also includes other goods such as suitcases, briefcases, pipes and lighters. Of special weight are a number of services (for instance, vacations and travels, insurance) as well as taxes and fees. Simple watches cost twice as much in the GDR as in the FRG, modern watches many times as much. Genuine jewelry is also expensive in the GDR, while services are cheaper, with a few exceptions (for example, trips abroad). In both types of households the purchasing power of the Mark is about 90 percent that of the D-Mark, based on West German consumption habits.

The calculation carried out according to West German categories of demand, because of the differences in the budget systems of the two states, for most of the categories does not permit a direct comparison of buying power according to the GDR consumption structure. (Footnote 13) (The tables included show the different systematic arrangements. They agree in the case of foodstuffs and luxury foods. However, under the GDR system, industrial goods and services are separate categories; in the FRG, on the other hand, they are grouped together according to areas of demand.) To remedy this, the FRG consumption structure was rearranged according to the GDR system.

Since the subdivisions are defined differently than before, by necessity different purchasing power parities result for individual items. However, the outcome for the total cost of living remains untouched by this. The ratios after the rearrangement can be compared directly with the buying power parities according to the GDR consumption structure.

Table 2

Buying Power Parities of D-Mark and GDR Mark in 1985<sup>1</sup>  
 Computed According to the Consumption Structure in the FRG for Selected Household Types,  
 Subdivided into Categories According to the GDR System; in percent.

Expenditures according to categories	4-Person		2-Person	
	Wage Earner Household 2)	Percent of expenses	Pensioner Household 3)	Percent of expenses
	Relative buying power of Mark 4)		Relative buying power of Mark 4)	
Goods				
Foodstuffs and luxury foods	64	62.0	72	54.7
of these: foodstuffs	89	26.6	87	32.3
luxury foods	99	17.8	102	23.9
consumption in restaurants	52	5.3	42	5.2
Industrial goods	205	3.5	200	3.2
of these: textiles, clothing and shoes	53	35.4	58	22.4
of those: shoes, leather goods	41	8.7	39	7.1
textiles and clothing	56	1.8	49	0.9
furniture	38	6.9	37	6.2
household goods	46	1.9	49	0.9
electric products	73	1.4	82	1.1
other products	26	2.5	29	1.5
Services 5)	70	20.8	101	11.8
rents	256	34.4	301	43.3
electricity, gas, water	530	17.7	529	24.0
transportation services	285	4.8	306	7.3
culture, sports, travels	246	3.0	260	4.6
repairs	113	5.1	89	2.9
other services 5)	158	1.6	182	1.5
Taxes, insurances, fees	136	2.2	185	2.9
	201	3.6	210	2.0
Cost of living, total	89	100.0	110	100.0
Cost of living, without rents	76	82.3	88	76.0

1) Mid-year position.-- 2) Average of all 4-person, wage earner households with medium income; head of household as sole earner.-- 3) Two-person households of pensioners and social security recipients.-- 4) Buying power of Mark in the GDR compared to D-Mark in the FRG.-- 5) Without services for health care.--  
 Source: Computations by DIW.

### ...On the Basis of Consumption Habits in the GDR

As a rule, the relative purchasing power of the Mark is higher when established on the basis of GDR consumption habits. This already becomes clear in the category of foodstuffs and luxury foods. Compared to the D-Mark, the buying power of the Mark is now 113 percent; in the case of the FRG consumption pattern—oriented toward higher-quality goods—it was only 89 percent and 87 percent, respectively. The foodstuffs category contributed considerably to this result, not only because of its relatively greater importance in the GDR, but particularly because especially goods of relatively low prices constitute a high proportion of consumption there (for instance, meat, sausages and lunch meats, potatoes, milk, unprocessed vegetables). Furthermore, some high-priced products in the GDR (such as tropical fruit, fruit juices) only carry little weight because of clear supply shortages. One exception, however, is cocoa. For wage earners, the purchasing power of the Mark vis-a-vis the D-Mark on the basis of GDR consumption habits reaches 118 percent. For pensioners, who can consume fewer high-priced products, it is as high as 126 percent. This is clearly higher than if based on FRG consumption habits (around 100 percent). In the case of luxury foods, also, not only is the percentage of total expenditure higher in the GDR than in the FRG—and especially in the case of pensioners—, but also the buying power ratio (55 percent vs. 42 percent compared to the D-Mark). The high consumption of expensive coffee by pensioners in the GDR is balanced by a relatively higher consumption of cheap goods (for example, tea, beer, and lower-grade tobacco products). Regarding consumption in restaurants and company lunchrooms, the purchasing power of the Mark for both types of households (over 210 percent) is somewhat higher than in the FRG consumption structure (about 200 percent).

Although the range of items in the industrial goods category offered in the GDR has improved in recent years both in quality and assortment, medium-quality products are still preponderant. High-quality merchandise, on a level with international standards, are much rarer. This, and the differing importance of subgroupings, result in the fact that the purchasing power of the Mark is clearly higher when based on the GDR consumption pattern rather than that of the FRG. In the case of GDR pensioners who have to make do with simple goods, it attains 95 percent of the D-Mark (based on FRG consumption habits, it is only 58 percent). For wage earners, already oriented toward a broader range of goods, it comes to 73 percent (vs. 53 percent). Among industrial goods, the buying power of the Mark is weakest for electric appliances which are heavily burdened with consumption taxes in the GDR (levies tied to products) and, therefore, are very expensive. It is clearly below 30 percent of that of the D-Mark. In the textiles and clothing category, because of some very high prices in the GDR, the buying power of the Mark generally reaches only about 40 percent of that of the D-Mark. Based on both consumption structures, the purchasing power of the Mark for furniture ranges between 40 and 50 percent of that of the D-Mark. In the case of shoes, purses and other leather goods, the buying power of the Mark in the GDR comes to 60

percent or 55 percent, respectively, of that of the D-Mark; according to FRG consumption habits, it is even less. For the proportion of higher-quality shoes, which are particularly expensive in the GDR, is greater in the FRG consumption structure than in the GDR. For household goods, where there is a great spread of GDR prices, the GDR consumption structure shows a buying power of the Mark of 85 percent that of the D-Mark; according to FRG consumption habits, it is less among wage earners (75 percent).

In the very heterogeneous category of other goods, which under the GDR system includes cars and sporting goods, optical equipment, clocks, watches, business merchandise as well as printed products, paper goods, potted and cut flowers, motor and heating fuels, the purchasing power of Mark and D-Mark is about the same, over-all, according to the consumption structure of wage earners in the GDR. According to the weightings of the subgroups, price ratios favorable for the GDR (such as motor and heating fuels, newspapers) are balanced by unfavorable ones (for example, cameras, cars, watches). An important factor is that in the GDR, cars play a much lower part in GDR consumption than in the FRG, due to a much lower degree of motorization and comparatively simple car models (Trabant and Wartburg) with a long life-span (high demand for spare parts). On the basis of FRG consumption habits, because of the much higher proportion of car purchases of higher quality and more expensive models, the purchasing power of the Mark must of necessity be considerably lower for the entire category. It is only 70 percent of that of the D-Mark. Computed on the basis of both consumption structures, the purchasing power of the Mark is considerably greater for pensioners, oriented toward a simpler line of goods, than for wage earners. Here, also, exists a buying power gap unfavorable for the FRG pensioner, precisely because some things are part of their living standard which GDR pensioners can hardly afford.

Services, which are generally very work-intensive, are usually much cheaper in the GDR, mostly due to the comparatively lower wage levels. Furthermore, in many cases they are subsidized. Certain services (such as public transportation, education, and culture) are also subsidized in the FRG, but to a much lesser extent than in the GDR. Compared to the FRG, it is striking that the proportion of expenditures for all services is less than half. This is not only a consequence of lower expenditures due to lower prices, but in many categories also an expression of clear insufficiency of capacities in the GDR. For example, repair shops, gas stations and hotels are scarce. All services taken together, there is little difference in the buying power of the Mark under both consumption structures. Under GDR consumption habits, it is about 300 percent that of the D-Mark for wage earners, and 320 percent for pensioners. Comparable values for the FRG consumption are at 260 and 300 percent, respectively.



Table 3

Buying Power Parities of D-Mark and GDR Mark in 1985  
1)  
Computed According to the Consumption Structure in the GDR for Selected Household Types; in percent.

Expenditures according to categories	4-Person Wage Earner Household 2)		2-Person Pensioner Household 3)	
	Relative buying power of Mark 4)	Percent of expenses	Relative buying power of Mark 4)	Percent of expenses
Goods	93	82.8	106	81.5
Foodstuffs and luxury foods	113	41.0	113	51.1
of these: foodstuffs	118	27.0	126	34.4
luxury foods	56	9.8	55	13.3
consumption in restaurants	213	4.2	210	3.4
Industrial goods	73	41.8	95	30.4
of these: textiles, clothing and shoes	46	14.3	43	11.0
of those: shoes, leather goods	60	3.2	55	1.9
textiles and clothing	42	11.1	40	9.1
furniture	42	2.1	54	0.9
household goods	83	1.8	85	1.7
electric products	28	3.4	28	3.2
other products	102	20.2	157	13.6
Services	294	14.7	322	16.9
rents	537	3.4	555	4.3
electricity, gas, water	327	1.8	354	2.4
transportation services	362	1.2	311	2.4
culture, sports, travels	172	3.7	156	1.8
repairs	196	2.3	202	2.3
other services	165	2.3	192	3.7
Taxes, insurances, fees	177	2.5	211	1.6
Cost of living, total	124	100.0	145	100.0
Cost of living, without rents	110	96.6	126	95.7

1) Mid-year position.--2) Average of all 4-person, wage earner households.--3) Two-person, pensioner households without income from gainful activity.--4) Buying power of Mark in the GDR compared to D-Mark in the FRG.  
Source: Computations by DIW.

Table 4

Buying Power Parities of D-Mark and GDR Mark in 1985<sup>1)</sup>

Expenditures according to categories in total	Relative Buying Power of GDR Mark 2)	
	4-Person wage earner household	2-Person pensioner household in percent
Consumption structure in the FRG	89	110
Consumption structure in the GDR	124	145
Crossing of consumption pattern	107	128

1) Mid-year position.-- 2) Buying power of the Mark in the GDR compared to the buying power of the D-Mark in the FRG.

Source: Computations by DIW.

In the case of rents, based on both consumption structures and both types of households, the Mark has a buying power five times as high as that of the D-Mark. For expenditures for electricity, gas, water, and transport services, it is between two and-a-half to three times as high. These differences result from divergent consumption patterns.

In the culture, sports, entertainment and travel category, the purchasing power of the Mark according to GDR consumption habits is 172 percent for wage earners, and 154 percent for pensioners compared to the D-Mark. This is distinctly higher than with FRG consumption habits (113 and 89 percent, respectively). With a similar travel quota in both territories (number of vacation travelers per 1,000 inhabitants per year), in the GDR domestic travel is preponderant, while foreign travel dominates in the FRG. In the GDR, the inexpensive vacation service of trade unions and companies plays a large part. Short trips arranged by travel bureaus are almost as expensive as in the FRG, and vacation trips to East bloc countries are even twice as high. Much less expensive are fees for kindergartens and adult education courses, as are tickets for sports and cultural events, and fees for radio and television.

Other services (such as laundry, cleaning, photographic work, hairdressers' services) as a rule cost only half as much in the GDR as in the FRG (exception: color film processing). Accordingly, under the GDR consumption pattern the buying power of the Mark compared to the D-Mark is 165 percent for wage earners, and 192 percent for pensioners. Under FRG consumption patterns, however, it is distinctly less for wage earners (136 percent), since there is generally greater demand for higher-quality services.

With the exception of motor vehicle taxes, payments in the category of insurances, fees and motor vehicle levies are distinctly lower in the GDR than in the FRG. Over-all, this results in a purchasing power of the Mark about twice as high as that of the D-Mark.

#### Summary of Results

The price ratio between the FRG and the GDR show a wide spread for similar goods and services. It is still valid that

- prices for goods of basic requirements, for apartment rents, and most other services in the GDR are far below the FRG level;
- as a rule, prices are much higher in the GDR for luxury foods, higher-quality products of fashionable design, durable consumer goods, and new products.

The price differences have the effect that the average purchasing power of the Mark compared to the D-Mark drops with higher incomes and more demanding consumption habits. With a rising standard of living, the proportion of goods of a semi-luxury type increases in total consumption. Therefore, the purchasing power of the Mark is lower when applied to the

much more varied FRG consumption pattern than that of the GDR. This trend results in a lower purchasing power of the Mark for the consumption patterns of wage earners compared to the more modest consumption pattern of pensioners. Furthermore, it holds generally true that the buying power of one's own currency with regard to domestic goods is higher than if compared with those of the other, since consumer attitudes adapt to existing supply and prices.

Based on the pattern of living according to the consumption structure in the GDR, the average purchasing power of the Mark for a 4-person, wage earner household is 124 percent of the buying power of the D-Mark; i.e., for the same goods and services one had to pay about one-quarter more in the FRG than in the GDR in mid-1985. However, according to the FRG consumption pattern, the relative purchasing power of the Mark (89 percent) was considerably lower. For pensioner households, the parities are more favorable for the Mark; they are 110 percent for the FRG consumption pattern, and 145 percent for the GDR consumption pattern.

By using differing household types and consumption structures, one gains an idea of the extent of differences in consumer parities. By establishing mean values--"crossing of consumption patterns"--, the results can be brought together. This is problematical, however, because of the wide spreads. The mean value of the purchasing power ratio of Mark and D-Mark, based on the consumption structures of the FRG and GDR, stands at 107 percent for the 4-person, wage earner household, and 128 percent for the 2-person, pensioner household. The purchasing power of the GDR Mark, measured against the D-Mark, is therefore higher in both cases.

The purchasing power computations of the DIW are always based on the conditions (prices, supply of goods, consumption structure) found during the respective key years in the FRG and GDR. The Federal Office of Statistics, on the other hand, uses constant weighting systems over a prolonged period in order to determine the price development independent of the structural component. In comparing DIW results with former studies, it must be noted that changes may be due to price as well as structural influences. Compared to 1983, the consumer parities between D-Mark and Mark for consumption over-all have remained almost the same, but there are certain deviations in individual goods categories. For example, the purchasing power of the Mark has further increased for rents, electricity, gas and fuels, while it decreased for foodstuffs and luxury foods. In the former case, price effects were decisive, while in the latter, price and structural changes probably played a part. A significant reason for the Mark's purchasing power not having increased over-all is probably the slowed-down price increases in the FRG.

It must be pointed out once again that the level of purchasing power parities must not be equated with the level of the standard of living. In addition to prices, availability of goods and the size of income are decisive. Although more wage earners contribute to the income of a household in the GDR, the average net income of wage earner and pensioner

households (based on the respective currencies) are more than double in the FRG. Adjusted for the difference in purchasing power (through the ratios of "crossed" consumption patterns), the real income lag in the GDR is still 50 percent. This gap would widen even more, if the supply problems in the GDR were taken into consideration. (Footnote 14) (In a U.S. work, based on an earlier DIW comparison of purchasing power, an attempt was made to also take into consideration in the computation the lack of availability of goods, with the aid of an econometric model of the 4-person wage earner household (FRG consumption structure). According to this study, the purchasing power of the GDR Mark had to be stated as about one-eighth lower. -- Compare Irwin L. Collier: "Connections, Effective Purchasing Power and Real Product in the German Democratic Republic." Dissertation. Massachusetts 1984, p 96).

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## ECONOMY

## GERMAN DEMOCRATIC REPUBLIC

## ECONOMISTS ANALYZE ASPECTS OF PRODUCTION PREPARATION-PHASE

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol 34 No 5, May 1986 pp 641-59

[Article by Prof Wolfgang Heyde, Dr of Economics, qualified university lecturer, certified economist, born 1926, director of the Section for Socialist Industrial Economy with the Technical University of Dresden; and by Gerd Laudel, Dr of Economics, certified industrial engineer, born 1940, lecturer with the same section of the same university; and by Prof Franz Pleschak, Dr of Economics, certified industrial engineer, born 1940, full professor with the same section and university; and by Prof Helmut Sabisch, Dr of Economics, certified industrial engineer, born 1934, director of the Science Branch with the same section, same university. Original title: "Complex Production Preparation as a Requirement of Comprehensive Intensification of Economic Processes".]

[Text] [English-language Summary]

Comprehensive intensification of economic processes places rising demands on production preparation in industrial combines and enterprises. This goes along with a marked interpenetration of responsibilities at the stage of production preparation and results in an increasing complexity of the processes of production preparation. The authors identify the characteristics of complex production preparation and derive relevant conclusions for the management, planning and organization of innovation processes. They point out how under such conditions research and development schemes as well as assessment and decision-making must be further improved at the stage of production preparation. Emphasis is laid on the introduction of computer-assisted technologies (CAD-CAM) to improve the handling of the complex processes of production preparation. Conclusions are drawn with regard to the responsibilities of managerial staff in preparing the introduction and efficiency-oriented application of CAD-CAM solutions.

The continued gradual improvement of the people's material and cultural living standard, the allaround strengthening of socialism and the securing of its defense capability presuppose a steady and dynamic output and effectiveness growth on the part of the national economy. "The critical point is to ensure economic growth through comprehensive and sustained intensification. This means that the targets for a rise in labor productivity must be set high and it demands that the specific production consumption be further reduced. Better



quality and greater effectiveness are the foundations of all national economic planning." (Footnote 1) (Tenth Conference of the SED Central Committee, E. Honecker, "Zur Vorbereitung des XI. Parteitages der SED" [On Preparations for the 11th SED Party Congress], Dietz Publishers, Berlin, 1985, p. 30.) In particular, the important thing is to integrate the latest results of scientific-technical progress into the cycle of intensively expanded reproduction in a thoroughgoing manner and with maximum effectiveness and, for this purpose, to make ever better use of all of the potentials of the socialist production method.

Comprehensive intensification—which is characterized by the utilization of all intensification factors during all phases of the reproduction process and which is aimed at achieving greater effectiveness through new products and new technologies—brings out the factors needed for a high degree of dynamics in economic development. It is increasingly sustained by the economic utilization of key technologies, such as the broad-based employment of microelectronics, computer technology, flexible automation, biotechnology, and new raw materials. This introduces stiff requirements for work in all sectors of the combines. Using socialism's advantages for the purpose of mastering the scientific-technical revolution, the organic tie-in of science and production, and their mutual permeation establish tasks and criteria for all work collectives. Significant innovations originate from basic research. In this process, they start with market-oriented sales and foreign trade activities, they presuppose creative work in the development of products, technologies, and basic assets, they are connected with high performance levels for modernization, in the supply of hardware and software through the construction of rationalization equipment, and they demand circumspect disciplined work during transfer into production all the way to steady production organization with the renewed product assortment and the renewed technology.

The new and qualitatively higher requirements addressed to production preparation in the combines and enterprises are particularly pronounced. In combination with the essential qualitative changes in the system of the production forces through the scientific-technical revolution and the state of socialist production conditions that has been reached, these requirements necessarily lead to the development of a new quality, a higher development stage in production preparation which is suited to the work-time-saving and asset-saving type of comprehensively and intensively expanded reproduction.

Starting with the SED resolutions on the implementation of economic strategy under the conditions of comprehensive intensification, through the generalization of many different kinds of experiences of the advanced combines and of discoveries in enterprise management research, we will in the following illustrate essential aspects of complex production preparation. (Footnote 2) (Cf., "9. Tagung des Zentralkomitees der SED" [Ninth Conference of the SED Central Committee], "From the Political Bureau Report to the SED Central Committee," reporting officer: E. Honecker, Dietz Publishers, Berlin, 1984; "10. Tagung des Zentralkomitees der SED" [Tenth Conference of the SED Central Committee], loc. cit.)

## Requirements for Production Preparation Arising from Comprehensive Intensification

Comprehensive intensification as a process within which the workers come to grips with objectively rising targets and the ways leading there means that the subjective factor plays the decisive role in the final analysis. "Man with his abilities is the main production force and we must act accordingly." (Footnote 3) (10. Tagung des Zentralkomitees der SED," loc. cit., p 35.) This is why the development of a new quality in production preparation is above all closely tied in with the political leadership of the work collectives, the improvement of the skills of the managers, researchers, and development specialists for the technical and economic tasks. A growing role is played here by the establishment of a creative work atmosphere, the promotion of innovator activities, the readiness to work hard and take risks, as well as education in discipline and order. Socialist competition as well as stimulation in terms of ideas and material aspects are also becoming increasingly important in production preparation.

The requirements levelled against production preparation reflect the complexity of the objective needs arising during the implementation of the new stage of economic strategy which, as a whole, are aimed at growth and the decisive improvement of the ratio between result and expenditure in the combine's closed reproduction process.

First of all, it is necessary in production preparation even more lastingly to contribute to the reduction of production consumption. Decisive prerequisites can be created in the sectors of design, technological production preparation, and process development in order to reduce the expenditure of materialized labor in a comprehensive sense. In this process we must start with the total future life cycle of the products in order, so to speak, to reduce the material expenditure and the necessary basic assets utilization during production, the use of energy, auxiliary materials and spare parts during practical application and extensively to close the substance cycle through the recovery of the material and substance essence after its separation.

Second, production preparation must make sure that human labor will be used with greater efficiency in all stages of the reproduction process. The point of departure for this is the design of efficient products requiring little attendance and maintenance which will also reveal a high degree of reliability and flexibility. The development of modern production tools and their integration with the corresponding robot, transportation, and storage equipment, measurement equipment, as well as supply and waste removal equipment as well as computer equipment with the pertinent programs and data bases for the solution of complex automation problems--these create possibilities for a decisive reduction in the necessary work time expenditure. But at the same time they demand a goal-oriented production preparation effort which will be coordinated with product and technology development. The growing spectrum of tasks in production preparation calls for an increase in and the better utilization of its output capacity, as well as the full effectiveness of the workers' creative force for the production of a high new product value which means that we will be keeping up with the objectively necessary trend toward a higher degree of refinement.



Third, production preparation must react to the change in needs and requirements much faster. This higher reaction capacity relates to the introduction of new products, the adaptation of existing solutions to customer or market requirements, the change in the utility properties of the products and of the production yardstick as a function of changes in the requirements, as well as the change in balancing conditions. The prerequisite for this is flexible work in the sectors of the reproduction process and here the increase of flexibility in production preparation is the decisive point of departure for the development and introduction of such complex solutions.

Fourth, modernization and rationalization of the existing material-technical base increasingly determine the tasks of production preparation. The introduction of new products and technologies is most closely tied in with the development of efficient rationalization equipment, the implementation of general repairs needed for modernization of basic assets, and the creation of the corresponding software. Comprehensive intensification in all combines and enterprises calls for making sure that investments will become effective as "one of the most important moving forces of economic growth" in that they lead to a considerable rise in effectiveness. Here it is important to use a growing part of the investment resources for rationalization projects (Footnote 4) (Cf., "9. Tagung des Zentralkomitees der SED," loc. cit., p 41.) The ever closer interlacing of research-and-development and basic assets reproduction emerges here as a consequence that is decisive for production preparation. This applies not only to the planning and preparation but also to the execution of processes intended to implement scientific-technical progress. "Scientific-technical tasks and the preparation of the corresponding investment measures are to be planned, managed, and accounted for as a uniform process from the very beginning." (Footnote 5) (Ibid.)

Fifth, it is becoming necessary to bring the key technologies fully to bear for the sake of triggering innovation processes which have a high effectiveness potential. "What we need here are significant innovations, such as only future-oriented basic research can spawn them." (Footnote 6) ("10. Tagung des Zentralkomitees der SED," loc. cit., p 32.) Such real innovations are connected with a high degree of complexity regarding cooperation in research and development as well as in the material-technical backup support of the production base. They have far-reaching and complex effects on the phases and elements of the in-house reproduction process, during the preliminary and followup stages, as well as at the consumer end. The more innovation corresponds to the revolutionary process of scientific-technical progress, the more head start and expenditure will be required in production preparation, in which connection the latter then itself runs through an innovation process.

The work areas of production preparation are becoming increasingly intertwined in keeping with these objective requirements; the complex character of production-preparing processes now takes shape.

The following make up the subject of complex production preparation:

Uniform long-term-design work for the entire reproduction process at whose center we find the refinement concepts;

Need and market research, as well as long-term sales preparation for new products;

Scientific-technical production preparation with specifically goal-oriented basic research and applied research, development and introduction of new products and processes, as well as rationalization of current production through technical and organizational measures;

Organizational preparation all the way to the interface with planning and control of production;

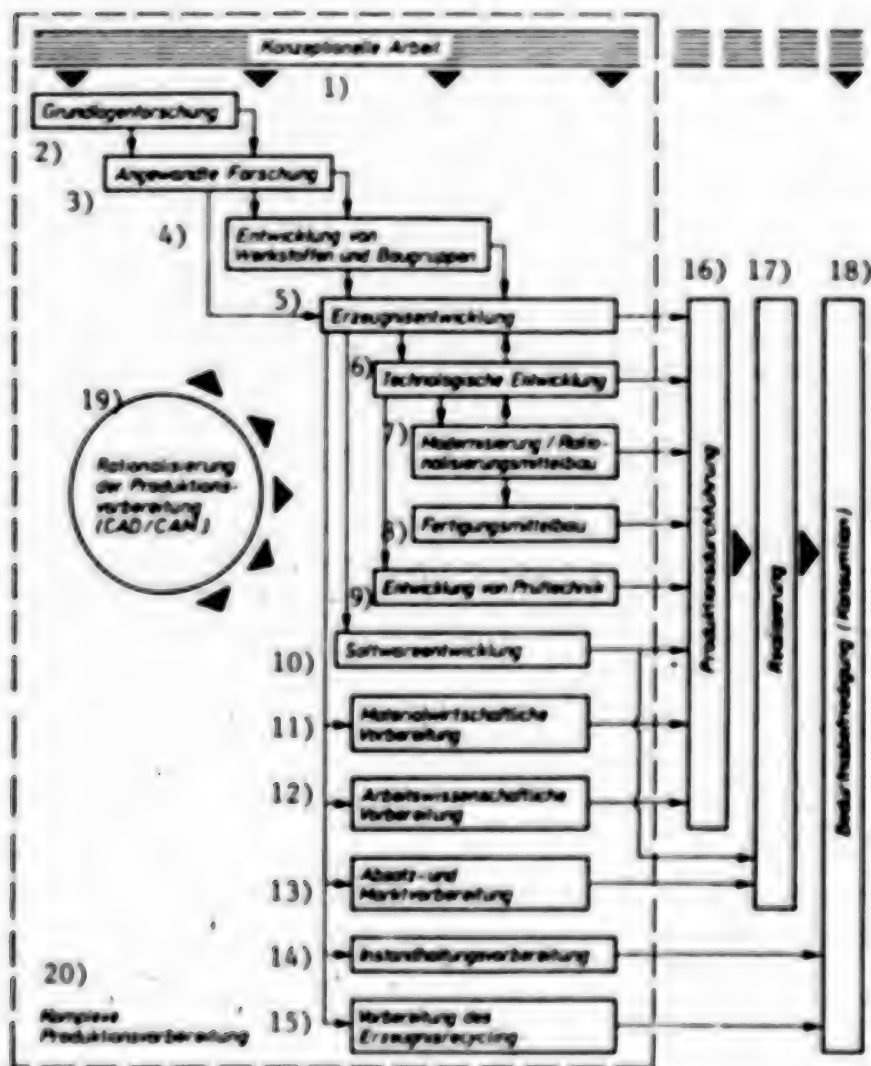
Preparation of new production in terms of material management;

Preparation of basic assets reproduction, especially through maintenance and modernization, as well as expansion of the equipment inventory for the implementation of key technologies;

Labor-science preparation of production, especially regarding the guarantee of future functional and operational reliability during operation, consideration of ergonomic requirements, of scientific work organization, of the development of creativity and the preparation and promotion of higher worker skill levels;

Social preparation of production--in close conjunction with labor-science preparation--especially regarding the creation of performance-promoting working conditions and the alteration of work contents, during the transition to multishift work, during job changes for the purpose of starting operations in new production phases which arise from modernization, as well as in connection with guaranteeing work safety and health protection.

This situation and the reciprocal relationships existing between the process components of complex production preparation are illustrated in Figure 1.



- Key:
- |   |   |
|---|---|
| 1. Concept [design] work;                                 | 11. Material-management preparation                     |
| 2. Basic research   | 12. Labor-science preparation                           |
| 3. Applied research                                       | 13. Sales and market preparation                        |
| 4. Development of raw materials and structural components | 14. Maintenance preparation                             |
| 5. Product development                                    | 15. Product recycling preparation                       |
| 6. Technological development                              | 16. Production implementation                           |
| 7. Modernization, rationalization equipment construction  | 17. Product sale  |
| 8. Production equipment construction                      | 18. Need satisfaction (consumption)                     |
| 9. Development of testing equipment                       | 19. Rationalization of production preparation (CAD-CAM) |
| 10. Software development                                  | 20. Complex production preparation                      |

The prerequisite for increasing the economic effectiveness of scientific-technical progress in the course of the reproduction process and especially as regards the development of top-level performances is the further development of the production-preparing potential of the combines in all of its parts and in an intensive way. In particular it is important to increase the output capacity of the research and development teams, of rationalization equipment construction, and of other components of the potential of production preparation. Important ways of doing this include the unfolding of the workers' creativity in the course of the development of novel solutions and their practical application in production, the improvement of management and planning activity in the course of production preparation, the development of optimum proportions between components of the potential, boosting science cooperation between the combines and the academy installations, universities, and advanced schools, the rationalization of production preparation through the use of modern computer equipment, as well as the improvement of information activities relating to scientific-technical development as well as requirement and market development.

The internal relationships between conceptual work and head-start research, requirement research and product development are simultaneously strengthened in this process when it comes to meeting new needs and using new work and action principles on the basis of key technologies.

By the same token, research-and-development and rationalization equipment construction are becoming increasingly intertwined. This is so, on the one hand, because the high intensity level of relationships between product, process, and the means of labor demands complex, user-related rationalization solutions. This means that the tempo of transfer can be speeded up considerably and that the production knowhow can be utilized directly for the perfection of production equipment. Besides, the in-house production of rationalization equipment makes it possible to avoid undesirable premature disclosure of in-house innovation strategies. On the other hand, this is so because rationalization equipment construction must above all be further developed in qualitative terms and, to this end, needs a corresponding research and development potential for the sake of employing microelectronics and the development of user software. (Footnote 7) (Cf., *ibid.*, p 34.)

In general it is true that the internal interrelationships between the work areas mentioned grow definitely under the influence of significant innovations. Here, the higher degree of parallelism between them, which is on the whole necessary to speed up the production-preparing processes, works as a reinforcing factor.

Rising requirements for production preparation furthermore arise from the growing performance spectrum of the combines and enterprises. Along with scientific-technical progress, the change in needs, and in view of the aspect more complete resources utilization, the production preparation task field becomes broader along with the performances offered by the combines and enterprises.



The following tendencies are typical: material products are joined increasingly by immaterial scientific-technical results and performances for third parties which are sold in the form of goods (licenses, knowhow, consulting, etc.). Individual work tools are blended into adaptable and expandable as well as compatible product systems. At the same time, problem solutions, tailored to specific user needs, are being offered more and more on an international scale. The growing system character increasingly requires planning work and performances having to do with installation, assembly, and start-up. There is furthermore a need for performances for the entire life cycle of the products from utilization preparation (training the users) via constant spare parts supply all the way to cooperation in subsequent modernization and so-called "machine recycling." (Footnote 8) (Cf., S. Wentzel, "Questions of Comprehensive Intensification as Part of the Analysis of the Ninth Conference of the SED Central Committee," WIRTSCHAFTSWISSENSCHAFT, No 6, 1985, p 810.)

The components of products having to do with product working and product processing (above all in machine-building, as well as equipment and system construction and in electrotechnology) are tied in with data-processing components and automation equipment through the use of microelectronics. This gives us products whose "hardware portion" must be supplemented by software so that they can be made to work, in the first place, and in order thus to achieve refinement effects. The production of software now joins the production of the material product. (Footnote 9) (Cf., W. Huebner, W. Marschall, K. Steinitz, "Microelectronics, Development of a New Equipment Type and Comprehensive Intensification," WIRTSCHAFTSWISSENSCHAFT No 7, 1984, p 984f.)

The production-equipment-making combines are broadening their output spectrum by adding highly-refined technical consumer goods for the sake of the allaround development of the consumer goods supply. Here it is above all important to develop effective solutions which are in keeping with existing and growing requirements, which express the most modern level of scientific-technical progress in the particular field, which are organically connected with the combine's production profile, and which make full use of the vast treasure of experiences of the workers in development or production. This calls for the specialization of efficient components of the existing potentials for consumer goods development as well as the intensification of market research and market promotion in the combines.

The tendencies illustrated here--which of course emerge in a differentiated fashion in the individual combines--result in noticeable consequences regarding the structures, processes, and activity images in production preparation as well as concerning the tie-in with other phases of the reproduction process. For example, the penetration of data processing equipment into many machine-building and equipment construction products leads to the necessity of building up capacities for circuit design in the production-preparing divisions of the particular combines and partly also to take over the manufacture of circuits to meet the needs of in-house production starting with a specific technological stage. (Footnote 10) (Cf., "10. Tagung des Zentralkomitees der SED," loc. cit., p 35.)

The complex character of production preparation is fashioned by force of objective necessity as a result of the increasingly mutual dependence of the phases of the reproduction process in the combine and the interlacing of intensification factors. But the growing concentration of combines--on the supplier and sales sides--with the national economic reproduction process in conjunction with the practical application spread and the propagation speed of significant innovations as well as the process of socialist economic integration boost the complex character of production preparation.

The goals and the complex character of production preparation call for commensurate ways of behavior on the part of managers and staff members in these divisions. Here we have first of all the political leadership of the collectives because the implementation of innovation processes involves tasks designed to strengthen socialism, because commitment and discipline depend decisively on the grasp of the task's political dimension. On this basis, there is increasing significance in the intellectual anticipation of the entire future reproduction process in order to produce the necessary decisions at the right time, the constant analysis of work results in the light of effectiveness targets, a creative operating procedure utilizing efficient problem solution methods, and the guarantee of a high degree of response capacity in production preparation.

#### Tasking Workbook, Complex Production Preparation, and Comprehensive Intensification

In keeping with its special role as tried and proven management, planning, and working instrument for the production-preparing process, the tasking workbook must increasingly take into account the complex character of production preparation and thus the requirements of comprehensive intensification. (11) (Cf., "Decree on the Tasking Workbook for Research and Development Tasks--Tasking Workbook Decree--Dated 17 December 1981." GESETZBLATT DER DDR, Part I, No 1, 1982; "First Implementing Regulation for the Decree on the Tasking Workbook for Research and Development Tasks--Tasking Workbook Decree--Dated 23 November 1983," GESETZBLATT DER DDR, Part I, No 36, 1983.)

First of all, the important thing is to bring out the correct political ideological positions concerning work on the tasking workbook in all collectives and among all managers and staff members. This is expressed in the consistent discharge of the responsibility of general managers for the confirmation of the tasking workbook, a high degree of performance readiness on the part of the collectives, but especially also in connection with the rather risky advance into genuine virgin territory, just as in the course of an honest comparison of the level that was attained with the objective requirements. This is also borne out by the basic subordination of combines interests to the national economic requirements, the broad unfolding of socialist teamwork within the combine and with its production cooperation partners, as well as the goal-oriented involvement of the vast potential of the innovator movement in work on tasking workbooks--starting already with the initial drafting and confirmation of the tasking workbook targets.

Second, it is important to make sure, through work on the tasking workbook, that products and performances or services will reveal a high degree of marketability on international markets. This calls for real top-level performances which, for the duration of their effectiveness on the market, in terms of the decisive scientific-technical parameters, determine or at least help determine international top-level standards and which increasingly need a corresponding scientifically and economically sturdy head start. Big economic results on the international markets are achieved today above all whenever a new problem solution, a new action or working principle is offered for the first time.

It is indispensable for the development of marketable products consistently to start with the objective requirements of society, with the specific need on the individual target markets, and the specific user demands. Here again efficient need and market research as an integrating component of complex production preparation and its active influence upon research and development work is an unavoidable prerequisite. The necessary collaboration between research and development, need and market research, as well as sales or foreign trade should set in already during the design phase and should extend all the way to the effective series support for currently produced items. In this respect, the drafting of "market activity task workbooks" or market introduction concepts by the pertinent foreign trade enterprises proved to be valuable in various industry branches.

Third, in the leading combines it proved to be a good idea, during the drafting of the tasking workbook targets, consistently to start with international maximum standards in the particular field and with the development tendencies found in scientific-technical progress. This is of growing economic significance above all because the tempo of production force development is accelerated on an international scale along with the further advance of the scientific-technical revolution. "We must keep up with this process. This is the only way we can speed up our own development tempo and attain the necessary level of labor productivity. ...The GDR must struggle to win top-level positions in decisive fields." (Footnote 12) ("10. Tagung des Zentralkomitees der SED," loc. cit., p 31.)

The complex prognostically oriented world level requirement is the most important management and working tool for this purpose. With its help, one must compare the attained or planned scientific-technical, economic, and social parameters of a product or a technological process against the maximum level worldwide, against the level demanded on the international target markets, as well as the objective development trends in science and technology--in each case related to the specific point in time at which the scientific-technical results will take effect on the market. (Footnote 13) (Cf., Group of Authors, "Weltstandsvergleiche--Aufgaben, Methoden, Erfahrungen" [World Level Comparisons--Tasks, Methods, Experiences], Die Wirtschaft Publishers, Berlin, 1982, p 15f.)

Working with world level comparisons as an essential part of work on the tasking workbook proved to be valuable in most combines and enterprises. Restrictions can arise in the spectrum of possible equipment in the light of investment strength and material implementability. The optimum configuration of equipment and instruments must be determined with the help of variant comparisons.

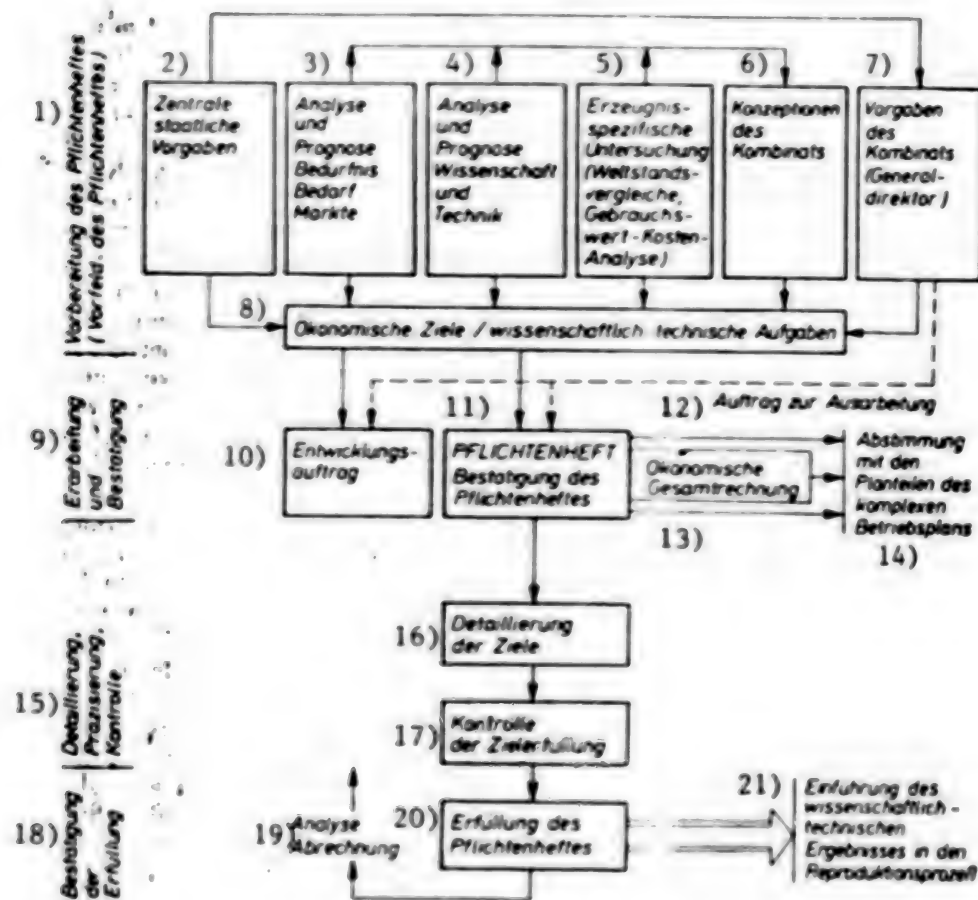
Looking at the new phase of economic strategy, it is however important to use world level comparisons even more comprehensively for the sake of great output and effectiveness growth. This above all calls for the inclusion of market-economics indexes in the comparison, in other words, especially those economic criteria which, along with the scientific-technical parameters, determine the saleability and export profitability on the international markets. That includes such specifically product-related and specifically market-connected brokerage and sales conditions as prices, payment and credit terms, level of customer service, advertising, and publicity work, existing shares of the market, sales organization effectiveness, etc. Even though these criteria cannot in all cases be matched up with quantitative magnitudes, their thorough analysis is a decisive prerequisite for strengthening the export power of the combines.

No less important for the saleability of products is their level of investiveness and their esthetic design. Well-prepared world level comparisons should therefore include patent-law indexes as well as shape-determining parameters or they should also be supplemented by special "design comparisons" for products that are particularly relevant in terms of design and form.

To be able to derive progressive targets for the point in time at which a planned development result becomes fully effective on the market--and, furthermore, considering the duration of the period of the market--it is unavoidable to estimate the future development of the international level with an adequately large "lead angle." Important working steps here include the thorough analysis of pertinent patent literature and the determination of development laws and tendencies for the decisive product parameters. The perfection of work with world level comparisons in keeping with the requirements mentioned presupposes a higher degree of complexity in production preparation, a closer tie-in between analytical and conceptual work, research and development, requirements and market research, market promotion on foreign markets, patent law work, etc.

Fourth, it is important correctly to manage the overall process of work on the tasking workbook and to integrate it into the combine's management and planning process. As the lessons learned by leading combines confirm convincingly, work on the tasking workbook cannot be confined to the phase of tasking workbook drafting alone but in the final analysis covers the entire life cycle of a product or process, especially also the specific designation and achievement of the goals, including the process of accounting for target attainment (see also Figure 2).





- Key:
- |  |   |
|--|---|
| 1. Preparation of tasking workbook (introduction to tasking workbook)                                | 11. Tasking workbook, confirmation of tasking workbook                    |
| 2. Central state tasking requirements  | 12. Elaboration order   |
| 3. Analysis and forecasting of need, requirements, markets   | 13. Economic overall calculation  |
| 4. Analysis and forecasting of science and technology  | 14. Coordination with the plan parts of the complex enterprise plan       |
| 5. Specifically product-related investigation (world level comparisons, utility value-cost analysis) | 15. Details, specific designations, checkup                               |
| 6. Combine's concepts  | 16. Detailed presentation of targets                                      |
| 7. Combine's tasking requirements (general manager)  | 17. Checking on target attainment   |
| 8. Economic goals, scientific-technical tasks  | 18. Confirmation of meeting tasking workbook                              |
| 9. Drafting and confirmation   | 19. Analysis, accounting  |
| 10. Development order  | 20. Meeting tasking workbook  |
|  | 21. Introduction of scientific-technical result into reproduction process |

The thorough and long-term preparation of tasking workbooks is particularly important. This must be viewed in two dimensions: on the one hand, as a constant analytical, prognostic, and conceptual effort in support of the reproduction process of the combine as a whole; on the other hand, as specifically task-related preparation for the particular products, technological processes, and methods. As for task-related preparation of tasking workbooks, it has proved to be practical in a series of combines to secure important spade work and production cooperation performances with the help of a specific completion run (for example, start of comprehensive data search about a year, working out the world level comparison about half a year prior to confirmation of tasking workbooks submission of initial proposals for target and task designation to the general manager 3 months prior to confirmation deadline).

Fifth, the effectiveness of work on tasking workbook depends decisively on the degree to which one manages to coordinate the totality of necessary performances and conditions in the tasking workbook, that is to say, the interconnections of a product development effort with the required technological preparation all the way to the modernization of capital goods, the blending of a product into a product system, the parallelism of equipment and software development, etc. To master this complex arrangement, it proved to be helpful in some industry branches to work with "system task workbooks" from which one can derive the tasking for the components of the product system in keeping with the structure of that product system.

Securing the full effectiveness of planning and balancing of the indexes spelled out in the tasking workbook is decisive when it comes to the attainment of the tasking workbook targets. Here, the thorough elaboration of the overall economic calculation for the tasking workbook assumes special significance. (Footnote 14) (Cf., "Order on the Overall Economic Calculation for Research and Development Assignments and the Year-End Calculation for Science and Technology, dated 23 November 1983," GESETZBLATT DER DDR, Part I, No 36, 1983.)

Besides, an important task consists in breaking down and detailing the target, spelled out in the tasking workbook, for an individual product, into a target requirement for the component assignments to be accomplished in terms of design, technology, and transfer, in market preparation and user training, and to specify this in such a manner that the particular processing teams will be able to influence the attainment of their subtarget requirements also directly through their work. This is an important prerequisite for performance evaluation and for providing incentives for the collectives but it is also the foundation for the evaluation of the intermediate steps and partial results achieved in the course of the individual work processes. As CAD-CAM solutions make further headway, it becomes necessary to perform this evaluation also in a computer-assisted manner. For this purpose it is necessary to create highly informative data banks with corresponding standard values, with cost and price ceilings, international optimum values, price data on planned export markets, etc., and to work out corresponding dialog-capable computer programs for advance cost and price calculation, for the computation of effectiveness indexes, etc.

In combination with the described detailed and specific presentation, the tasking workbook is increasingly becoming a decisive working tool for all workers in production preparation who are involved in the development, production, and market introduction of new products or technologies and, beyond that, in the entire combine. This means that individual responsibility, as well as personal contribution to the performance and effectiveness rise in the combine become clear to each individual employee.

#### Complex Evaluation and Decision-making in Production Preparation

The increasing complexity of production preparation also has an effect on the content and methods used in the evaluation of its tasks and results. Evaluation, in the most general definition of the term, always means judging the degree of goal attainment which is achieved with a certain evaluation object. To be able to evaluate, one must sufficiently know the desired goals and the actual or planned level to be evaluated and one must furthermore have a uniform criterion for the determination of goal fulfillment. Evaluation thus is also always connected with the measurement or estimation of individual parameters as well as with comparison of various states.

The content of evaluation in production preparation consists in judging scientific-technical assignments, intermediate and final results regarding the attainment of the scientific-technical, economic, social, or other societal goals constituting their foundation, considering their time frame (time factor). This is necessary in order to be able to estimate the hitherto attained or planned development level and in order thus, from a comparison with other solutions, with international top-level standards, with technical, economic, and social requirements (in the form of user requirements, government standards, etc.) to derive new ideas and to achieve greater effectiveness. An evaluation is a prerequisite for being able to select the most effective variant from different variants for the solution of a certain problem. It serves for determining and checking on the progress of development in the process of scientific-technical work as well as for the preparation of scientifically-based decisions, the confirmation of assignments or results, the determination of orders of rank or sequence, etc. This means that the evaluation is always integrated into the management and planning process as well as into the scientific-technical work process. It serves directly to increase the economic and social effectiveness of science and technology.

As Guenter Mittag emphasized, economic evaluation here is at the focus in keeping with the requirements of economic strategy. "The economic result constitutes the incontrovertible yardstick for the effectiveness of scientific-technical work. It is part of the economist's responsibility not to allow any criterion other than the criterion of expenditure and result for the judgement of the way in which science and technology are utilized."

(Footnote 15) ("Oekonomische Strategie der Partei--klares Konzept fuer weiteres Wachstum. Wirtschaftswissenschaftliche Konferenz der DDR im Karl-Marx-Jahr 1983 am 29. und 30. September in Berlin" [The Party's Economic Strategy, a Clear Concept for Further Growth; Economic Conference of the GDR During the Karl-Marx Year of 1983 on 29 and 30 September in Berlin], Dietz Publishers, Berlin, 1983, p 68.)

The economic evaluation of measures relating to scientific-technical progress encounters its most comprehensive expression in the determination of effectiveness. Voluminous methodological discoveries and experiences as well as binding legal regulations are available in this connection. (Footnote 16) (Cf., "Order on the General Guideline for the Determination, Planning, Checking, and Accounting of Effectiveness of Measures of Scientific-Technical Progress Dated 5 May 1982," GESETZBLATT DER DDR, Part I, No 8, 1982.) For certain evaluation and decision situations—for example, in the processes of design and technology development—it may however also be necessary to confine oneself to a restricted determination of the costs or certain cost elements or selected utility components.

Taking the complexity of evaluation into account means grasping the social effort—which is connected with the accomplishment of certain technical projects or solutions—during the production preparation phase itself, coupled with the utilization of the scientific-technical results in production and in the use of new products in productive or nonproductive consumption; it furthermore means comprehensively determining the benefit arising during production, sale, and practical application, and it means basing the decision on national economic criteria. The complex evaluation of scientific-technical tasks and results however is moreover always to be construed as a judgement of the degree to which all-societal goals were attained and it cannot be reduced alone and generally to economic evaluation. That is not justifiable especially when we are dealing with scientific-technical measures that offer a high degree of social effectiveness for the combine's workers, when we deal with assignments in basic and applied research with a high degree of lead time, when we face development topics with a high degree of novelty or technical developments and production plants. In these cases, the thorough determination of the social effects (for example, change in work contents and in the skill level of the workers, improvement of work safety and health protection, guaranteeing environmental protection), of the effect of lead time or of other utility components is an indispensable part of the evaluation of scientific-technical tasks.

Paying attention to the dialectical reciprocal effect of social and economic result components is of decisive significance. Thus we see that social improvements for the workers have a direct effect in terms of an increase in their output capacity and readiness to perform; they promote the courage to push into scientific virgin territory and they foster the readiness of research and development cadres to take risks. Here one must consider the special "long-term effect" of social results in the reproduction process. The unity of economic and social goals of scientific-technical progress must therefore be given consistent attention in handling all evaluation assignments in the process of production preparation; it represents a decisive requirement of the proven unity of the party's economic and social policy at the level of science and technology.

Here are typical evaluation assignments and decision situations in complex production preparation:



Evaluation of the development level of products produced and performances, of applied technologies and basic assets used as foundation for necessary decisions regarding the rationalization of production-preparing processes and the rise in the effectiveness of the reproduction process (instruments: analysis of development progress, performance comparisons, world level comparisons, technological level comparisons, basic assets analyses, market studies);

Selection of optimum refining concepts and, derived from them, product, basic assets, and market strategies of the combines and enterprises (instruments: refining concepts, prognosis of market and requirement development, investigations on the life cycle of products and performances, determination of optimum innovation strategies, optimization of production programs);

Determination and confirmation of progressive scientific-technical, economic and social targets for research and development tasks, basic assets reproduction measures, market introduction and market assurance tasks (instruments: prognostic world level comparisons, forward-looking effectiveness determinations, advance calculation of costs and prices, determination of price and cost ceilings, methods of scientific work organization);

Evaluation and effectiveness determinations in the process of research and development as foundation for the selection of variants, confirmation of solution components (instruments: process-accompanying evaluation, specific effectiveness calculations during the individual stages of development, computer-assisted evaluation as a component of CAD-CAM solutions);

Evaluation of the level of quality development and quality assurance in the entire reproduction process (instruments: quality analysis and quality planning, work with quality labels, computer-assisted quality assurance systems as component of CAD-CAM solutions).

The subjective factor plays an essential role in all of the production preparation evaluation tasks described. Evaluation methodologies therefore are always only an aid for the decision-making process, for the search for new and better solutions. The goal as expressed in terms of content is thus always in the foreground and the methodological procedure is subordinated to it. In this sense, evaluation is an instrument for responsible action on the part of managers and all workers involved in the innovation process. It helps develop thinking oriented toward the national economy, to grasp important interrelationships in the reproduction process of the combines, and to develop socialist teamwork in depth between teams of development engineers, production divisions, sales and foreign trade agencies, and users.

#### **CAD-CAM Solutions—Key Technology for Better Mastery of Complexity of Production Preparation**

One can meet the rising requirements for production preparation only if its output capacity and its effectiveness are increased decisively. Among the

possible directions and ways of rationalization aimed at the better mastery of the complexity of production preparation we find that across-the-board computer use is particularly significant. The use of computer equipment with the pertinent program and data base is the specific form of flexible automation in production preparation. (Footnote 17) (Cf., group of authors, "Oekonomie der Automatisierung" [The Economics of Automation], Die Wirtschaft Publishers, Berlin, 1985.)

In the case of computer-assisted solutions, which are confined to selected task areas in production preparation, for example, in the form of product-related program systems for design, program systems for technological production preparation based on the principle of similarity planning or new planning, programs for special activities in production preparation, such as calculating, drawing, and optimizing, we can observe the benefit in terms of work time savings in production preparation and, to a limited degree, we can see this through the improvement of the quality of production preparation work results. This brings about savings in the manufacture and use of products. The effectiveness potential inherent in computer-assisted work, above all regarding the reduction of the time duration for production-preparing and production-executing processes, the improvement in the reaction capacity of the combines to the dynamics of demand and the improvement of product effectiveness, is fully utilized in and across-the-board computer-assisted effort. Decentralized equipment placed near the work station, progress in the scientific permeation of processes in design, planning, and technology, as well as in the standardization of primary documentation—these require favorable prerequisites for this. The compulsion toward across-the-board computer-assisted work in production preparation is boosted by the practical implementation of complex, flexible automation solutions.

CAD-CAM solutions facilitate computer-assisted work from the design process via technological preparation all the way to the control of production implementation. They supply the necessary data both for flexible automated manufacturing systems and for the computer-assisted management and planning of the reproduction process.

As was confirmed at the Tenth Conference of the SED Central Committee, work processes are increasingly permeated by automation. The latter is geared toward flexible production. One cannot any longer work any other way today. (Footnote 18) (Cf., "10. Tagung des Zentralkomitees der SED," loc. cit., p 37.)

This process of flexible automation leads to new work contents. That includes the creation of the prerequisites for the development of the program base. Software for practical application is for the most part worked out by the users themselves. The programs are effective only if they are fed into the experiences and the knowledge of the best designers, technologists, and planners. Through rationalization one must gain capacity in order that the interdisciplinary work of designers, technologists, data processing specialists, mathematicians, organizers, and economists, might produce programs which start with the requirements of complex production preparation, which take effect quickly, and which offer a promising outlook for the future.

Man, with his capacities, is the main production force in the process of the preparation, elaboration, introduction, and application of CAD-CAM solutions. This is why management tasks also include making sure that there will be far-sighted skill training. Familiarization with CAD-CAM equipment, imparting abilities and skills needed to operate, service, and care for them are included here just as much as passing on the best lessons learned during the perfection of the organizational base of production preparation and during the deeper penetration into the technical-economic laws of the objects and processes of production preparation—something which is the point of departure for mathematical elaboration. This recognition of new design and technological interrelationships motivates the engineers to use the computers. Giving the workers in production preparation an incentive must include the development of program building blocks; here we can make sure that the products and processes will not change before the software takes effect only if the programs have short development times. Any still existing reservations which, for example, are expressed by the attitude of "rush orders can be handled faster without EDP," can be counteracted by means of convincing examples. Basically this involves evidence to the effect that new products can be developed, made, and sold quickly, in a flexible manner in keeping with the requirements of the international market, coupled with a small expenditure and with high quality and effectiveness—of course with the help of CAD-CAM.

It is typical here that across-the-board CAD-CAM solutions are implemented step by step. Some limited solutions, which however are ready for use, must be employed here before the total solution takes effect. This means stiff requirements in terms of design preparation. The individual, computer-assisted processes can be hitched up in data-processing terms only if the various building blocks fit together properly and if there are clear interfaces between the automation elements. That calls for modular concepts for equipment, as well as the program and data base. The modular structure guarantees the flexibility and expandability of the solutions; it improves the possibilities for the perfection and updating of the programs, for the insertion of new modules, for the exchange of program building blocks, and thus also for followup use. The object-dependent (subject-related) tie-in of programs is all the more readily possible, the more one can fall back upon base building blocks that can be employed in a multivalent manner. Close cooperation among the science and technology sectors as well as between organization and data-processing is indispensable for the implementation of such a concept. The latter prepare the concept for the hardware and software framework; they develop fundamental software and they support all sectors during the actual program composition. The design, planning, and technology sectors contribute specialized technical knowledge on the processes to be rationalized. It is necessary to overcome a rather important management experience derived from successful CAD-CAM work, as well as parochial working and thinking and to organize socialist teamwork that will extend across the various sectors. The coordinating, guiding, and organizing work of the CAD-CAM specialists or contract managers will be all the most effective here, the more the general managers and the plant managers directly take over at the very head of the process involved in developing and introducing solutions.



CAD-CAM solutions must start with the objectively given complexity of production-preparing processes. For this purpose, it is necessary to record their functions, to systematize them and to break them down into the various component elements, as well as to determine the interrelationships existing between them. This is required so that computer use may be founded on the objectively necessary flow of information. The critical main points and the solution approaches for a partial, activity-oriented employment of computer equipment became visible by means of the isolated analysis of the fundamental operations and elementary activities, broken down by critical main points of expenditure, algorithmability, and influence on product effectiveness; at the same time, when it comes to preparing across-the-board CAD-CAM solutions, the analysis and planning of the consequence of operations, the interconnections existing between them, as well as the rules and regulations of information tie-in, are moved into the foreground. This presupposes the investigation of tasks, functions, and processing procedures in production preparation itself and their relationships with production execution. Information flow analysis, the effect chain analysis, and the development of process networks proved to be a methodological aid in recording this complexity.

The preparation of CAD-CAM solutions is connected with comprehensive choice decisions. This includes the following:

First of All: Selection of objects (individual parts, structural components, products) for which a CAD-CAM solution is to be worked out. Favorable conditions here consist in the case of those objects which have a high repetition factor but which, in case of invariance of the basic principle in differing modifications, must be offered, developed, and produced in keeping with the specific user requests. Those objects are particularly suited which have attained a high development level in terms of mathematical formalization and in algorithmability, which offer favorable prerequisites for the practical implementation of a planning-oriented operating procedure, and which reveal a high technological level in terms of production execution. The necessity is particularly pronounced for those objects by which the duration of the reproduction process is decisively determined.

Second: Selection of production-preparing and production-executing processes which are to be included in the CAD-CAM solution. On the basis of the process characteristics, the possibilities for algorithmability and programmability, as well as the performance capacity of the computer equipment to be used, it is then necessary to decide which process components are to be worked out inside the computer, which of them are to be developed by way of man-machine dialog, or which are to be handled outside the CAD-CAM solution to be designed.

This decision is influenced by the level of the data base, knowledge about the regulations of information tie-in, the possibilities of connecting up with existing and planned computer programs for management and planning. One must furthermore consider the existence of program building blocks which can be used in a multivalent manner and whose object will not vary, along with the possibilities of their adaptation, as well as the influence of the process steps upon the quality and effectiveness of the object (in connection with evaluations, optimizations, and simulations).



Third: Selection of the structure of computer equipment and the peripheral units. The structure and parameters of the instruments and equipment to be used must be determined by way of a close reciprocal relationship with the designing of the CAD-CAM process structure. A growing process volume creates not only higher requirements for the program and data base but also for the output capacity of the computer equipment. From the frequency with which individual programs are used, we can figure out what kind and how many work station computers are needed for certain task areas and how the connection to the central computer must be made under certain circumstances. The volume of the data files and the frequency with which the data are retrieved will determine the magnitude of the memory storage units to be set up in a decentralized and centralized fashion. Available equipment can establish certain limitations regarding expandability and connectability. Restrictions can arise in the spectrum of possible equipment in the light of investment strength and material implementability. The optimum configuration of equipment and instruments must be determined with the help of variant comparisons. Differing solution variants for computer-assisted work spring from the connection of various versions of equipment, program and data base, as well as different forms of organization. The highest automation level is presently characterized by work station computer systems with intelligent terminals for interactive work which are connected to a central computer. In keeping with the specific nature of the production-preparing processes, it is then necessary to process alphanumerical and graphic data. Program systems are being developed for across-the-board design-engineering and organizational production preparation as well as the control of the production process in the course of man-machine dialog; here, the data of the data bank, which are stored in a centralized and decentralized fashion, can be retrieved directly. The particular optimum automation level is influenced both by the specific reproduction conditions and by the task areas to be included in computer-assisted work and they are found in the context of effectiveness studies.

Fourth: Determination of effectiveness of the designed CAD-CAM solution. Effectiveness cannot be determined only from the angle of production preparation. Across-the-board CAD-CAM solutions also bring about process changes in production execution, in management and planning, as well as in the actual sale of the products. This is why special care must be taken in the determination of the benefits to be derived from higher product quality, reduction of manufacturing and utilization costs, shortening of processing times, and increase in reaction capability. When integrated into the creation of flexibly automated production systems, CAD-CAM solutions ensure a proportional development of the output capacity of production preparation and production execution. In combination with rapid product renewal, they constitute an important factor in profitable export transactions. It follows from all of this that the real effectiveness of CAD-CAM solutions can be documented only with the help of complex effectiveness studies.

The results of these investigations are included in the tasking workbooks used in the development, introduction, and application of the CAD-CAM solutions.

The change in the functional division of labor between man and working tool, which is connected with CAD-CAM solutions, leads to new organizational solutions for personnel employed in production preparation. They are expressed in new forms of division of labor and in changes in the process structure and the buildup organization derived from that. In interactive work, the computer handles the algorithmic tasks and man solves those problems and makes decisions that require creativity. Man is confronted with the results of the computer and, if necessary, puts new data in and controls the dialog. Creative work steps emerge much more sharply than in the conventional process. This means that the engineer and the economist must have a more profound knowledge of the interrelationships of the reciprocal relationships existing in the reproduction process between engineering and economics, between design science or technology and data-processing, as well as between object knowledge and method knowledge. The computer's speed forces man to make decisions and puts him under pressure to take action. The stresses resulting from that must be considered a part of man's daily performance curve and must be favorably distributed throughout the working day as a function of the individual performance capacity. This is why we must start with the requirements for optimum man-machine dialog already during the program development phase. (Footnote 19) (Cf., I. Boehm, F. Rudolph, "New Information Technologies and Modern Forms of Work and Production Organization to Speed the Reproduction Process in the Combines and Enterprises," WIRTSCHAFTSWISSENSCHAFT, No 12, 1984, pp 1784ff.)

Continued brisk advance on the road of comprehensive intensification confronts the workers in the production-preparing divisions of the combines and enterprises with stiff requirements but that applies also to the economists connected with those divisions. In the struggle for effectiveness-oriented, fast-reacting work that promotes the innovation process, the important thing is quickly to generalize the lessons learned and further to develop the scientifically based concept of a complex production preparation process, which is logically and harmoniously integrated into the compact reproduction process, on the basis of the party's guiding resolutions.

From this we can at the same time derive new requirements for higher skill levels to be derived from the training of economists and engineers at universities and colleges. What we need is a higher level of interdisciplinary collaboration between social scientists, natural scientists, and engineers in the course of the planned implementation of scientific-technical progress. This means that the designers, the technologists, and the research personnel must think along economic lines in tackling all scientific-technical assignments; it also calls for the goal-oriented cooperation of economists, sociologists, labor scientists, etc., during the preparation and making of decisions in the research and development process, utilizing the possibilities of modern computer equipment and data-processing. The "economist must recognize the great potential inherent in the scientific-technical revolution within its latest phase. His main concern must be to make sure that these latest results of science and technology will indeed be applied and that they will be embodied in new products and new technologies, coupled with the simultaneous improvement of the ratio between expenditure and result and the working and living condition of the people." (Footnote 20) ("Ökonomie Strategie der Partei—Klares Konzept fuer weiteres Wachstum...", loc. cit., p 68.)

ECONOMY

GERMAN DEMOCRATIC REPUBLIC

#### ECONOMISTS DISCUSS RECENT IMPROVEMENTS IN EXPORT STRUCTURE

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol 34 No 4, April 1986 pp 596-602

[Article by Thomas Soisson and Ellen Meyer: "Improvement of the Production and Export Structure of the GDR and Heightening of International Socialist Specialization and Cooperation"]

[Text] In this subject, a scientific colloquium was held 15 May 1985 at the Dresden Technical University, in which numerous representatives of universities and colleges, combines and enterprises took part. The colloquium was organized by the Socialist Enterprise Management Section and the work team "International Specialization and Cooperation" of the Scientific Council for Questions of Socialist Economic Integration on the occasion of the 20th anniversary of the work of the work team. The introductory reports were presented by Prof Dr Morgenstern, head of the work team (Technical University of Dresden), and by Dr Bandelin (Research Institute with the Ministry for Foreign trade).

In the report and in the theses, Morgenstern dealt mainly with the influential factors and the intensity of their effect on the formation of the production and export structure, the demands on the effective formation of the production and export structure of the GDR, and the requirements and tasks for the further heightening of international socialist specialization and cooperation in science, technology and production.

Morgenstern pointed out that scientific-technical progress, intensively expanded reproduction and continuing structural change represent an inseparable unity. The development of the production and export structure takes place under the influence of diverse factors. In regard to the intensity of their effect, Science and technology, the international division of labor, the conditions of the national economies, and demand thereby occupy a dominant position as factors determining the structure.

The report presented several essential changes in the effect of these factors, whose observance is of importance for the further structural formation. As guidelines for the further improvement of the production and export structure, the following should carry more weight than heretofore:



--a production absolutely suited to demand and the development and production of exportable products and services earning foreign exchange in accordance with the international market requirements and specific customer wishes, above all of the USSR, as well as in accordance with the import requirements of the national economy while raising the share of software and other immaterial work;

--ensuring of an internationally high scientific-technical level and of a high degree of innovation of the products and services with rapid market effectiveness and customer service fit for the world market, whereby an increasing share of the products must represent the highest international standards;

--concentration on highly refined products and science-intensive branches and productive capacities that are carriers of scientific-technical progress and that show dynamic growth, whereby important and effective traditional production and export lines must not be neglected;

--comprehensive guarantee of cost-effective production and economic production volumes as well as the increased development of international site advantages through the utilization of favorable research and production preconditions in the GDR, including own raw materials and material resources or rational and reliable imports of materials and supplies.

The putting of these demands into effect requires great efforts, for this development does not occur without contradictions and presupposes a great reaction capability of the national economies and combines to scientific-technical progress and to changing market conditions.

In a third key point, Morgenstern deals with the relations between national economic structural development and international socialist division of labor in the case of intensively expanded reproduction. A main direction of the higher stage of cooperation between the CEMA countries is the further qualitative development of international socialist specialization and cooperation in science, technology and production. There is a close correlation between the scientific-technical and economic development and the increase in the efficiency of the individual national economies, the internal pressure for intensification and efficiency, and the full development of the new function of international socialist specialization and cooperation. This consists in promoting intensive economic growth, the formation of the reproduction type with the all-round saving of resources, and the modernization of structures in the most effective way.

The enormous expenditures and demands above all in the key sectors of science and technology require a more extensive international division of labor and cooperation. Effects of scientific-technical cooperation must be reflected increasingly in progressive changes of the production and foreign trade structures of the national economies. That affects the interconnected processes of scientific-technical progress and the relations between scientific-technical cooperation, investment cooperation, reconstruction/rationalization, specialization and cooperation in production and foreign trade.



With the growing requirements for specialization and concentration, on the one hand, and the objective tendencies for the diversification of the assortment on the other, the question of the economic production scales and of an expedient assortment configuration arises anew. In this connection, it was stressed that concentration and specialization must promote scientific-technical progress, improved efficiency and a practical assortment configuration. The structural improvements achievable through concentration thereby depend to a considerable degree upon the selection of the most expedient international directions for specialization, the technology applied in each case, and the type of products.

In combination with the international specialization of final products, complete installations and production equipment, the international specialization and reciprocal exchange of component assemblies, individual parts and partial systems, especially of standardized component assemblies and supplies, becomes increasingly important.

In concluding, Morgenstern took up the necessary increase in the effectiveness of the cooperation and the improvement of management, planning and economic stimulation of specialized relations. For the qualification of efficiency calculations and evaluations for decisions on structural changes and specialization, tasks were developed for the further investigation of statements of individual efficiency indicators and of relations between the indicators and the criteria for the competitiveness of products in the world market.

Bandelin lectured on questions of the further development of the production and export structure of the GDR in the area of the metalworking industry. In his introduction, he stressed that the all-round intensification and the rapid pace of scientific-technical progress on an international scale require a thorough and far-reaching change in the production and export structure. In accordance with the economic strategy of the SED, industry in the GDR will be profiled primarily along the lines of a greater processing of raw materials and the greater incorporation of domestic raw materials into the national economic reproduction process as well as through the broad application of key technologies and the concentration of science and technology on the most promising development processes.

Bandelin made the focus of his statements correlations between changes in the demand structures of most CEMA countries resulting from their transition to intensively expanded reproduction and necessary structural changes in the production and foreign trade of the GDR. For the GDR, it is especially a matter of stabilizing profile-determinant export lines rapidly through a demanding scientific-technical level of products and services in accordance with the increasing requirements for problem solutions. The equipment and immaterial services must offer greater user's advantage, especially in regard to efficiency, energy saving, flexibility and reliability.

The further improvement of the production structure must consider primarily the development of the import requirements of the USSR and the other CEMA countries. It can thereby be assumed that most of the profile-determinant

product lines for export to the USSR likewise play a substantial role for export to the other European CEMA countries. In the coming years, one can expect a significant overall reconstruction demand of the USSR. A substantial increase in the import demand for machines and equipment as well as fundamental changes in their structure are to be expected. So it is a matter of continuous renewal in the microstructures of production and export with great stability in the main product lines. The timing of the bringing forth of innovations and of the implementation of microstructural changes in production and export will thereby attain noticeably greater weight.

As before, the clearly apparent progressive trends of the structural changes in the production and foreign trade of the GDR are to be supported through the further deepening of international specialization and cooperation. In some cases, the refinement of the export lines will mean specializing in certain lines of development within new producer or user complexes of products. In other cases, it will be necessary to reorient the international specialization or main export lines, as, for example, from machine tools to production cells, robot-supported technological complexes, and flexible automated production systems. It is thereby especially important, in close cooperation with the USSR and other efficient partner countries, to develop new production lines and technologies in new and progressive sectors of science and technology and to make them rapidly effective in exports.

The basic assertions of the theses and reports were approved in the discussion.

A first set of problems dealt with correlations between the formation of an effective production and foreign trade structure and the deepening of international socialist specialization and cooperation in science, technology and production.

Prof Dr Kohlert and engineering economics graduate Roessel (Carl Schorlemmer Technical College in Leuna-Merseburg) pointed out that there are close dependencies between the production and product structures. They are expressed in the fact that

--all objective production conditions are also elements of the product structure of previous production processes,

--a given production structure leads to a corresponding product structure by way of the production process,

--elements of the product structure become elements of the production structure of future production processes.

There are also close connections between the production, product and export structures. On this basis, Kohlert and Roessel come to the conclusion that the latitude for an effective formation of the export structure is relatively slight without the simultaneous structuring of production.

Dr Kraft (Central Institute for Economic Sciences under the Academy of Sciences of the GDR) derived interrelationships between structural development

and the international socialist division of labor from a theoretical reproduction point of view. He emphasized that advanced technologies serve to implement intensively expanded reproduction and to deepen the international socialist division of labor when the cooperation includes the entire "science-production-sales-introduction of technology" cycle and achieves a broad effect, and when an internationally coordinated development and production of products of key technologies is ensured through long-term specialization and stable cooperative relations.

Dr Heidel (Central Institute for Economic Sciences under the Academy of Sciences of the GDR) dealt in his contribution to the discussion with structural processes from the control of key technologies and the deepening of international socialist specialization and cooperation. Science and qualification-intensive advance performance (training and education expenditures for science and technology, technology-intensive investments) force every country to concentrate on selected focal points in science and technology and therefore on increased specialization and international cooperation. The use of microelectronics in traditional processes as well as in the building up of new automated production requires international coordination, specialization and cooperation in the development and the production of flexibly usable component assemblies, software and orgware, process technology, robotics and electronic data processing, including the necessary coordination of licenses, know-how and consultation in their complexity.

This was confirmed by engineering economics graduate Voigtlaender (VEB Robotron Elektronik, Dresden). He pointed out that the production and export structure of the combine has developed substantially under the influence of the demand of foreign markets, especially the USSR. In some product lines such as ESER-computers, series printers and office computers, substantial production volumes were achieved even in comparison with international standards. In carrying out the decisions of the economic consultation, it is a matter of the development of complementary rateable branch structures through

--the transition from the coordination of the product programs to the coordinated structural development of the industrial branches,

--the accelerated deepening of investment cooperation in bottleneck positions and

--the extension of direct relations, above all with efficient partners of the national economy of the USSR.

Engineer Jügel (VEB Kombinat Baukema, Leipzig) dealt with interrelationships between the deepening of multilateral scientific-technical cooperation and the improvement of the production and export structure. Assuming a high degree of specialization for machines and equipment for the building industry, road construction and the building materials industry, it is important to stabilize the international socialist division of labor through purposeful scientific-technical cooperation.

A second set of problems in the discussion concerned the necessary changes in the production and foreign trade structure under intensively expanded reproduction.

Dr Heiduschat (Research Institute under the Ministry for Foreign Trade) stressed that today and in the future it is a matter of continuously orienting the entire production base in the main lines of the export structure toward the internationally leading level of performance and efficiency. Heiduschat also pointed out that the demand of the Soviet Union in the 1980's and 1990's is concentrated primarily on achieving the following development goals:

--reconstruction and modernization of the existing production base in all branches of the national economy with simultaneous expansion on the basis of the most up-to-date resource-saving technologies;

--development of a highly efficient agriculture-industry complex as well as the most up-to-date technologies and production equipment for the processing of the agricultural products;

--reconstruction, modernization and substantial expansion of the production base for supplying the population with high-quality consumer goods and services on the basis of the most up-to-date technologies.

Dr Umbreit (Dresden Technical University) dealt in his contribution to the discussion with questions of quality and reliability as the decisive condition for the establishment of stable export lines. An effective economic utilization of new scientific-technical products can be achieved only when the scientific-technical trends are determined objectively and customer wishes and conditions of application are ascertained and consequently objectified. That includes the preparation of quality norms and standards on a bilateral and multilateral basis as well as the securing of a supply of spare parts adequate to the demand and the avoidance of early failures through the "shift of customer service from the market to product development."

Dr Soisson (Academy for Social Sciences under the SED Central Committee) indicated changed demand structures that objectively result from the transition to intensively expanded reproduction. Such changes are expressed, among other things,

--in the provision of complex user solutions by the specialized side,

--by the formation of uniform technical-technological systems, especially in the main directions of scientific-technical progress,

--in the consideration of customer-specific problem formulations by the specialized producer,

--in the retrofitting and renovation of already delivered equipment with means for control and automation.

The dynamic development of trade with immaterial services is a consequence of the progressive international socialist division of labor in research,



development and production, stressed Dr Paetzold (Dresden Technical University), for exports of products and material output are increasingly linked with additional immaterial services. Thus, in the export of plant and equipment, for example, 20 to 40 percent of the system value is realized as immaterial services.

Dr Andermann (Central Institute for Socialist Economic Management under the SED Central Committee) commented on the increase in the flexibility and ability to react as a market requirement. The rapid application of flexible automation solutions creates favorable possibilities for this. But to what extent does this key technology influence international socialist specialization and cooperation? Andermann took the position that through this the necessity of international socialist specialization is no longer derived superficially from more favorable conditions of production but rather the more efficient use of research and development potential comes to the fore. A focal point of further cooperation will shift to the international specialization of construction activity.

Additional contributions to the discussion dealt with criteria, prerequisites and conditions for efficient variants of international socialist specialization and cooperation in research, development and production to improve the economic structures.

Written contributions to the discussion were also presented by Dr Peters (Academy for Social Sciences under the SED Central Committee) on interrelationships between international socialist socialization and national economic structural development; graduate economist Herberg (Research Institute with the Ministry of Foreign Trade) on the main directions for the improvement of the production and export structure of the CSSR in the metalworking industry; Dr Kleindienst (College for Economics) on the influence of industrial price ceilings for new products on processes of structural improvement; and graduate engineering economist Schneider (Dresden Technical University) of international cooperative relations in plant construction.

Prof Dr Froehlich (Central Institute for Socialist Economic Management under the SED Central Committee) stressed that a decisive criterion in any measure for international socialist specialization and cooperation involves the provision of the highest possible net product with a structure appropriate to demand using available resources and under existing or manipulable conditions. The orientation toward the intrabranh divisions of labor to receive priority development among the fraternal countries requires complex efficiency studies of both exports and imports, whereby the latter currently represents one of the greatest problems of the efficiency verification.

Dr Keller (Central Institute for Social Sciences under the Academy of Sciences of the GDR) likewise affirmed that export/import profitabilities represent indispensable criteria in the evaluation of specialized structures. Additional decision criteria for the development of future structural profiles are, in order:

- trends in the international development of demand,
- immediate effects on the national economic growth factors,
- flexibility of the structure relative to innovative processes and capacity to absorb innovation,
- science intensity of the export and original value share in the planned export structure lines,
- realizable import efficiency in the reproduction process,
- import intensity of the export,
- utilization of natural resources and effect of certain structures on the environment.

Dr Wiczoreck (Dresden Technical University) commented on the increase in the efficiency of the price in improving the production and foreign trade structure. Pricing must promote a high international scientific-technical level of products and their rapid effectiveness in the market. Despite some problems, international product and price comparisons are a good decision basis for research and development facilities. In determining the probable foreign exchange proceeds of the export product to be developed on the basis of the evaluation of use characteristics suitable to the customer, the assessment of the market conditions, and the carrying out of the international price comparison, the close cooperation of the developing enterprise with the exporting enterprise and the foreign trade enterprise must be ensured without fail.

Dr Meyer (Dresden Technical University) pointed out the necessity of the further strengthening of the cooperation of the CEMA member countries in the realization phase as a precondition for the establishment of stable and above all effective cooperative relations.

Dr Kuehn (College for Economics) developed determining factors for the foreign trade structure of a socialist national economy. Kuehn thereby assumed the socioeconomic bases as well as the basic domestic and external conditions of a national economy and determined two main factor groups of the determinants of the export and import goods structure: differences in availability and differences in productivity.

The theses and contributions to the discussion appear in HEPTE ZUR SOZIALISTISCHEN BETRIEBSWIRTSCHAFT, No 30, Dresden Technical University.

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ECONOMY

GERMAN DEMOCRATIC REPUBLIC

## POTSDAM SOON TO COMMENCE PRODUCTION OF INDUSTRIAL DIAMONDS

East Berlin TRIBUNE in German May 86 p 12

[Article by Roland Tittel: "Synthetic Diamond Research Is Paying Off"]

[Text] It was praised as a tool by Plinius shortly after we started to record time. Leschot, a Swiss, was the first to use it in a drill in 1862. But not until it was practically no longer possible to machine with conventional cutting tools the ultrahard sintered metal carbides developed in the twenties of our century, did the diamond cease to be merely a jewel and engraving instrument, but rather rapidly became a highly effective industrial precision machine tool. Today, 80 percent of natural diamonds and the entire production of synthetic diamonds are being used in industry.

### They Improve Productivity

"The diamond in its polycrystalline variations and cubic boron nitride, a compound which, under high-temperature transmutation, also produces synthetic diamonds, are called superhard materials," explains Professor Heiner Vollstaedt, from the Central Institute for Geophysics at the Academy of Sciences. And he also comments on the significance of the responsibility of the 11th SED Party Congress to intensify research in this particular field:

Superhard materials are employed there where they are a factor in considerably increasing work productivity and quality. This is the case in many sectors of industry. For example, for separating, grinding and polishing rock in the building material industry, for separating, cutting and slitting in the ceramic industry, or for working synthetics like sprelacart in the lumber industry. Precision-polished areas on semiconductors in microelectronics can only be obtained with the above. Anything else is futile. In machine building, cubic boron nitride is very much in demand because more than any other material it can withstand the high temperatures employed in machining high-alloy steels. In this very application it is essential that service life (wearing resistance) of the superhard materials versus conventional hard substances, such as metal carbide or ceramic cutting materials, is ten to 500 times greater depending on the material and application.

Even in the textile or rubber industry they are in demand: Superhard materials cut through hundreds of layers fast while leaving a flawless edge. "Imports alone cannot satisfy this constantly growing demand," is Prof. Vollstaedt's judgement. "This mandates that research be intensified and domestic production initiated."

Potsdam Scientists received this assignment in 1983. Findings from research in the high-vacuum lab of the Central Institute for Geophysics offered optimum conditions to acquire internal know-how on the manufacture of diamonds. The basic start is with a carbon material such as graphite which, together with a melted solvent catalyst, is subjected to extremely high pressure. With proper thermodynamic conditions the melted solvent lodges between the graphite crystals and dissolves these in the form of modified graphite macromolecules. These are then capable of spontaneously forming diamond nuclei or seeds, respectively, or of growing on diamond nuclei.

#### They Fulfill Projected Expectations

Analogously to research on the synthesis of the "diamond without decorative jewel value" progresses work for polycrystalline molded bodies. They have the advantage that they do not occur in the form of powder but as immediately usable solids. They are even stronger and therefore even better suited than the granules which first have to be combined with an organic, metallic or ceramic bond to form a tool.

The first subassignment, to principally solve the problem on the basis of own technology and materials, has been fulfilled. The operation, which will produce in the future and which together with a transitional collective under the direction of Prof Vollstaedt has assumed the technological research, has also been found. The VEB Rationalisierungsmittelbau Potsdam, Division Oranienburg, shall produce synthetic diamonds in a year. A joint pilot plant will facilitate the continued efforts. At this time, the VEB Rationalisierung Potsdam is working on the improvement of the granules, conclusions are being drawn from small- and large-scale experiments. Users who are already working with the superhard materials from the Potsdam lab production are satisfied.

"In spite of this, the Party Congress task concerns us as well," says Prof Vollstaedt. "Our methods should become more economical and productive in quality and quantity. Larger crystals are what we strive for in order to use them in place of natural diamonds as drills or truing tool. And we shall continue to search for better blends made up of ceramic and superhard materials for composite tools."

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ECONOMY

GERMAN DEMOCRATIC REPUBLIC

NEW MEASURES ALLOCATE INDUSTRIAL-ACADEMIC RESEARCH FUNDS

East Berlin WIRTSCHAFTSRECHT in German Vol 17 No 2/86 (signed to press 3 Mar 86) pp 32-36

[Article by Dr Franz Hoche, head of the department for scientific-technical research in the Ministry for University and Technical School Affairs, and Prof Dr of Sciences Richard Klar, official of the Academy of Sciences of the GDR: "The New Standards for Research Cooperation Between the Combines and the Installations of the GDR Academy of Sciences and of the Universities"]

[Text] The further implementation of the economic strategy of the SED is largely characterized by the combining of the advantages of socialism with the accomplishments of the scientific-technical revolution, whereby it is crucial to achieve economic efficiency through first-class research results. This productive unity of science and production is brought about primarily within the combines but also in cooperation. The 10th Session of the SED Central Committee therefore established new standards for research cooperation between the combines, the installations of the Academy of Sciences of the GDR, and the universities and colleges. These standards for cooperation have the aim of:

--linking the academy and university research more closely with the process of the intensively expanded reproduction of the combines and letting their economic and technical-technological development requirements be part of the research strategy;

--concentrating academy and university research on the focal points and main directions of the most important scientific areas and key technologies and developing basic research so that it leads to "peak performance in science and technology that can be scientifically utilized substantially more productively" (Footnote 1) (E. Honecker, "On Preparing for the 11th SED Party Congress," speech at the 10th Session of the SED Central Committee, Berlin, 1985, p 32);

--developing cooperative relations according to economic criteria and greatly expanding them;

--perfecting the management and organization of the research cooperation on the basis of the plan and with the instrument of the commercial contract.

## Further Economic Growth Through the Necessary Economic Interlocking of Science and Production

The resolution of 12 September 1985 based on the results of the 10th Session of the SED Central Committee on the principles for the formation of the economic relations of the industrial combines with the installations of the Academy of Sciences and of the universities (Footnote 2) ("Gesetzblatt" [Legal Gazette] I 1986 No 2, p 9) combines these qualitative and quantitative factors into a basic regulation. The resolution has the aim of ensuring the economic interlocking of science and production necessary for further economic growth and of achieving a greater economic benefit from the research cooperation of the Academy of Sciences and the universities with the combines. The resolution thereby proceeds primarily from the responsibility of the combines in the national economic reproduction process, which, among other things, includes the systematic development of their own research potentials as well as the further processing and exploitation of the research results of the Academy of Sciences and universities. In this connection, the resolution stresses the innovative function of basic research, which "is an indispensable condition for the effectiveness and stability of scientific-technical progress and also an unalterable precondition for the achievement of top positions internationally." (Footnote 3) (K. Hager, "University Affairs After the 10th Session of the SED Central Committee," DAS HOCHSCHULWESEN, No 9, 1985, p 245) For the Academy of Sciences and the universities, the task that results is to carry on the scientific work and research with great theoretical depth and on a broad disciplinary basis, which is also necessary to meet the requirements of the teaching as well as of training and advanced training. It must still be emphasized that the resolution is based upon the experiences of the Academy of Sciences, universities and colleges in the development and formation of their research cooperation with industry. This concerns, for example, the participation of the combines in the outfitting of the academy and university installations with equipment, the formation of joint research, development and transport teams, the reciprocal exchange of personnel, the establishment and utilization of engineering schools, the setting up of consultative and advisory centers, and other things. In the work with economic contracts, successful were above all the coordination of administrative and planning activities and the preparation of the performance relations on the basis of coordination contracts as well as the linking of these coordination contracts with the corresponding performance contracts, which include duty books prepared and confirmed jointly. (Footnote 4) (In this connection, compare R. Klar, "The Role of the Economic Contract in the Heightening of the Cooperation Between the Installations of the Academy of Sciences of the GDR and the Combines," WIRTSCHAFTSRECHT, No 1, 1981, p 34) Of special importance for the systematic development of the cooperative relations of the Academy of Science with the combines was the use of combine representatives for combines important to the national economy, which did much to promote the teamwork between scientists of the Academy of Sciences and combine employees.

The resolution of 12 September 1985 is characterized by a number of transcendent aspects. The provisions aiming at a better control of the interrelationships between the plan and the contract should be named here first. The resolution provides that the research cooperation is to be planned

in the science and technology plans of the combines and in the five-year plan for the basic research of the Academy of Sciences and the universities (Item 3 of the resolution). In this connection, the resolution distinguishes between tasks of specific basic research and applied research that are to be linked with the combines on a contractual basis and tasks of investigatory basic research that are supposed to ensure the long-term scientific advance within the scope of the research programs and main directions of research. Together with tasks to resolve complex objectives of the state plan for science and technology affecting the national economy and selected tasks that are being worked on for uses outside of industry, they form the task-oriented content of the five-year plan for basic research. Especially important for ensuring the unity of the plan and contract in the area of science and technology are the provisions of the resolution that are oriented toward consistent tasks of the five-year plan for basic research and the science and technology plans of the combines. This results in important consequences for the joint strategic research work of the partners in cooperation and for their planning coordinated with respect to content.

An additional aspect of this type concerns the greater role of the economic contract, whereby the resolution emphasizes above all the connection between the effect of coordination contracts and performance contracts. From this results both higher demands on the formation and fulfillment of economic contracts to be entered into in the scientific-technical area as well as on the work with contracts in general. Questions of the preparation of the contracts, the holding of contract negotiations, the ensuring of contract performance and contract control will receive a higher value in management. In this way, the resolution translates into action the requirement contained in the directive of the 10th SED Congress on the five-year plan for the development of the national economy in the years 1981 through 1985 that the contract be developed into an active instrument for implementing the tasks established with the plan and with the balances. (Footnote 5) (Compare "Directive of the 10th SED Party Congress on the Five-Year Plan for the Development of the National Economy of the GDR in the Years 1981 Through 1985," Berlin, 1981, p 89)

The third aspect to be pointed out is that in the future research cooperation with the combines should be designed more in accordance with economic requirements. The measures provided for in the resolution in this connection mainly concern three economically relevant areas:

--the material and technical securing and rationalization of research, which takes into account the importance of research technology for the efficiency and performance level of scientific work;

--the rapid application of research results in production, their comprehensive economic utilization and exploitation and,

--the performance-related financing and pricing.

Finally, in the fourth place, the resolution establishes a close connection between the increased requirements relevant for research cooperation and the stimulation of creative performance. It thereby considers both the



operational side of incentives as well as the personal material interest of the scientists and thus substantially improves the existing system of incentives in the area of the Academy of Sciences and universities.

The resolution of 12 September 1985 made it necessary to recompose or change the regulations on the administration, planning and financing of the academy and university research as well as on the provision of financial resources for the contractually linked research cooperation of the combines with academy and university installations. On the basis of the resolution, the following measures have been passed so far:

--the Instruction No 2 of 9 December 1985 on the application of economic accounting in research and development (Footnote 6) ("Gesetzblatt" [Legal Gazette] I, No 34, p 389),

--the ordinance of 12 December 1985 on the administration, planning and financing of research in the Academy of Sciences of the GDR and at universities and colleges, especially the research cooperation with the combines--research ordinance (Footnote 7) ("Gesetzblatt" [Legal Gazette] I, 1986, No 2, p 12),

--labor-law provisions on the introduction of task-related efficiency bonuses in the areas of the Academy of Sciences and the universities. (Footnote 8) (Compare, for example, the agreement of 18 November 1985 on the application of task-related efficiency bonuses for scientific employees and research engineers in the Academy of Sciences of the GDR.)

#### On the New Research Ordinance

Effective 1 February 1986, the research ordinance of 12 December 1985 replaces the ordinance of 23 August 1985 previously in effect on the administration, planning and financing of research at the Academy of Sciences and at universities and colleges. (Footnote 9) ("Gesetzblatt" [Legal Gazette] II, 1972, No 53, p 589) Just as in the resolution of 12 September 1985, the new research ordinance is based--as expressed in the preamble--on the concept of heightening the linkage of science and production and of making the process research-development-production-sales more effective, that is, with greater effect for the national economy of the GDR. In this respect, the legal regulation of these relations in accordance with the principles of the resolution of 12 September 1985 is the main subject of the research ordinance. It should be noted, however, that the research ordinance--just as the ordinance of 23 August 1972 previously in effect--is valid for the academy and university research in its entirety and thus not just for the scientific, mathematic and technical basic research, which is the subject of the five-year plan for basic research. So the research concept used in the research ordinance is to be understood in this broad sense and includes--in addition to the scientific, mathematic and technical research--research in medicine and the agricultural and social sciences and relates not only to basic research but also to applied research and development work. The application of this uniform research concept, on the other hand, requires refinements that are taken up in the respective provisions under consideration.



Of continuing importance for the conceptual understanding is the chain of concepts research task/research process/research cooperation/research result linked with the research concept and applied throughout the ordinance.

#### Scope

In objective terms, the scope of the research ordinance extends to:

--the administration, planning and financing of the research done at the Academy of Sciences and at the universities and colleges;

--the actual research process, that is, the fulfillment of the research tasks including the organization and implementation of the research cooperation with the industrial combines as well as with combines, enterprises and installations of other areas;

--the protection and securing of research results;

--pricing and payment;

--the transferring of the research results to production and their utilization elsewhere in the GDR as well as in foreign economic relations.

It must be noted that the pricing provisions of the research ordinance (Section 18) are valid not only for research itself but also for services, products of commodity production as well as other work and results to the extent that no prices have been set for them on the basis of legal regulations.

With respect to personnel, the research ordinance is in effect for:

--the Academy of Sciences including its research areas and institutes (Footnote 10) (The Academy of Sciences of the GDR is a unified legal person and its organizational units have no legal competence; compare Section 2, Paragraph 1 of the statute of the Academy of Sciences of the GDR--resolution of the Council of Ministers--of 28 June 1984 ("Gesetzblatt" [Legal Gazette] I, No 19, p 241));

--the universities, colleges and scientific installations (such as libraries and museums, for example) under the Ministry for University and Technical School Affairs;

--state bodies, combines, authorities for economic management, enterprises and installations, to the extent that they are involved in relations in the sense of the objective scope of the research ordinance, that is, for all cooperative partners of the Academy of Sciences and of the universities and colleges.

In accordance with Section 1, Paragraph 3, the research ordinance is valid analogously for the Academy of Pedagogic Sciences of the GDR as well as for the colleges and scientific installations with the nature of a college under

the central state authorities; this does not apply for the Academy of Agricultural Sciences of the GDR and the Building Academy of the GDR. Neither is it valid for the colleges of the National People's Army, border troops of the GDR, and other protection and security entities.

The self-contained regulation of the scope of the research ordinance made it unnecessary to apply the instruction of 23 November 1983 on the application of economic accountancy in research and development (Footnote 11) ("Gesetzblatt" [Legal Gazette] I, No 36, p 387) to the Academy of Sciences and the universities and colleges as has been the case heretofore in part as provided for in Section 1, Paragraph 4 of this instruction. In accordance with Section 29, Paragraph 3 of the research ordinance, Paragraph V of the instruction is no longer valid for the Academy of Sciences and the universities and colleges beginning 1 February 1986. Thus there is now a clear differentiation of the scope of the research ordinance from that of the instruction on the application of economic accountancy in research and development. This instruction regulates the research and development process in industry, the building industry, and in other producing areas, a process organized according to the principles of economic accountancy, and it also regulates its links with production; it is the concern of the research ordinance, on the other hand, to interweave the academy and university research that does not take place in accordance with economic accountancy with production according to economic standards.

## Principles

The principles of the research ordinance have the objective of establishing the social function of the academy and university research (Section 2), of integrating the derivation and determination of the research tasks into the process of the state administration and planning of science and technology (Section 3), of regulating in principle the manner of the realization of the research tasks (Section 4), and of ensuring the conformity of intrastate research cooperation with international socialist scientific cooperation (Section 5). The provisions of this fundamental part are aimed, then, both at establishing the social role of the academy and university research under the conditions of the internationally accelerated development of productive forces and the comprehensive intensification of the national economy of the GDR as well as at further promoting the integration of this research into the overall process of social, economic and scientific development. This must take place under the substantial observance of the requirements of the economic and technical-technological development of these basic economic units, for the combines today "have become the backbone of the planned economy in our country functioning according to the principles of democratic centralism." (Footnote 12) (H. Koziolk, "Linking Science and Production," EINHEIT, No 1, 1986, p 12) These requirements also influence the tasks that must be resolved by the Academy of Sciences and the universities and colleges in the areas of the training and education of students, the upgrading of the skills of the junior scientific staff, and the advanced training of practical personnel (Section 2, Paragraph 2). The great importance of these tasks results from the simple fact that about 30 percent of the research potential of the universities and colleges comes from aspirants, research students and other students,

especially those working toward a master's degree. Youth projects as well as student rationalization and design offices and youth research teams formed jointly with cooperative partners have proven successful. In the student summer of 1985, more than 1,000 students worked for the first time on resolving the scientific-technical tasks of the enterprises and thus, after already having had several years of positive experiences in employment for tasks in the manufacture of scientific equipment, they received another area in which to prove themselves as FDJ student brigades.

In regard to the realization of the research tasks, the forms introduced with the ordinance of 23 August 1972 are the basis of the provisions of the research ordinance. For this, as you know, Section 9, Paragraph 3 of this ordinance provided for the issuing of state planning targets or assignments and the concluding of contracts. The research ordinance retains this principle of assigned research and sets forth in Section 4, Paragraph 2 that the research of the Academy of Sciences and of the universities and colleges will be carried out within the scope of

--commercial contracts with combines and other partners in cooperation,

--research assignments of the minister for university and technical school affairs, the rectors of the universities and colleges, or the president of the Academy of Sciences or chief of the research sectors of the Academy of Sciences.

The legal form of the commercial contract is prescribed for tasks of specific basic research and applied research and the legal form of the research assignment is prescribed for other research tasks to be resolved by the Academy of Sciences and the universities and colleges. Other tasks of this type to be considered are, for example, tasks of preliminary basic research and initiative research and tasks of medical research and research in the social sciences, etc. The exclusivity of the two legal forms also means that the Academy of Sciences and universities will be given no research without a commercial contract or research assignment representing a specific social need.

#### Management and Planning

The research ordinance stresses the responsibility of the minister for university and technical school affairs and of the president of the Academy of Sciences for effective management, planning and organization of research, whereby it proceeds on the assumption that this process must be made uniform and consistent. The focal points must thereby be continuous strategic research work that leads to a clear determination of research goals, the systematic development and concentrated application of the research potential, the intensification of the entire research process and its control, and the protection and utilization of the research results.

The ensuring of the uniformity and consistency of management is linked with special requirements where it is a matter of overlapping and interdisciplinary tasks on which several sectors are working--in complex research tasks, for



example. To ensure the necessary cooperation in such cases, administrative facilities can be established and representatives of the minister for university and technical school affairs or of the president of the Academy of Sciences can be employed (Section 6, Paragraph 4). In this respect, the research ordinance generalizes the experiences of recent years in the preparation and implementation of complex tasks of research in the social and natural sciences and technology. In such tasks, just as in the management of research in general, scientific councils and other scientific advisory groups are effective. Among the certain experiences of our science policy is that of objectifying the conclusions from forecasting estimates and the decisions on directions, goals and tasks of research through the opinion of competent groups. The competent managers in the area of the Academy of Sciences and the universities must also include the scientific groups in the assessment of the results and the social effectiveness of the scientific work and research as well as in the derivation of conclusions for the development of performance and efficiency (Section 8, Paragraph 1). The implementing regulation for the work of the scientific councils issued 17 March 1975 in connection with the ordinance on the management, planning and financing of the research at the Academy of Sciences of the GDR and at universities and colleges (Footnote 13) ("Gesetzblatt" [Legal Gazette] I, No 15, p 293) is not affected by the revocation of the ordinance of 23 August 1972 and remains in effect as the first implementation regulation for the research ordinance of 12 December 1985 (Section 29, Paragraph 4 of the research ordinance).

There are also requirements for coordination in regard to the interaction of the Academy of Sciences and the Ministry for University and Technical School Affairs with central state authorities and local councils. Because of the broad impact of basic research and the multiple applications of many of its results, the corresponding cooperative relations often extend beyond individual combines and influence the scientific-technical development of entire branches or sectors. On the basis of the responsibilities assigned to the ministries and other central state entities for clarification and decision on fundamental questions of cooperation (Footnote 14) (Section 17, Paragraph 2 of the "Vertragsgesetz" [Contract Law]; Part L, Paragraph 19, Item 1.2 of the 7 December 1984 instruction on the organization of the planning of the national economy of the GDR in the years 1986 through 1990 ("Gesetzblatt" [Legal Gazette] Sdr. No 1190 1)), the Academy of Sciences and the Ministry for University and Technical School Affairs enter into long-term agreements with them that have the primary objective of better coordinating and more closely linking the development strategies of the industrial branches and the long-term concept of basic research." (Footnote 15) (W. Scheler, "Interrelationships Between Basic Research and Production," EINHEIT, No 8, 1983, p 725) With the further development of industry under regional control, it will also be necessary to enter into such agreements with the councils of the regions. Section 6, Paragraph 3 of the research ordinance is the corresponding legal basis for this in combination with Section 4, Paragraph 1 of the law of 4 July 1985 on the local people's representations in the GDR. (Footnote 16) ("Gesetzblatt" [Legal Gazette] I, No 18, p 213)

The level of planning is of fundamental importance for increasing the economic efficiency of science and technology. With the research ordinance, there is further development of both research planning and the planning of the



interrelationships between science and production. For this further development of planning, the research ordinance includes four main concepts:

--Through a precise regulation of the initial conditions of planning, it is to be ensured that all critical social and national economic requirements and reciprocal relations are considered in the plans of the Academy of Sciences and universities and colleges. The elaboration of these plans is part of the overall social planning process and takes place in accordance with the legal regulations and provisions generally in effect for this purpose.

--The function of the five-year plan for basic research of the Ministry for University and Technical School Affairs was expanded. It includes the scientific tasks of most importance to the national economy for ensuring the long-term advances to achieve peak performance and additional tasks of great national economic importance, indeed in particular the tasks contractually linked with the combines, preliminary basic research tasks, tasks for the realization of projects of the state plan, tasks that are worked out on the basis of agreements with sectors outside of industry, and tasks for the development of the research potential. The five-year plan for basic research is to be broken down into annual plans, whereby its importance as a management instrument will increase.

--More coordination is required for planning. In this connection, the research ordinance sets forth in principle that the plan components of the Academy of Sciences and universities and colleges that are considered for research cooperation are to be coordinated among themselves as well as with the corresponding plan components of the combines. This also requires, for example, the coordination of the planning of science and technology with the planning of fixed capital and investments, which is especially important for ensuring the application of research results. Of great importance for the managerial control of the process of renovation from basic research to the production of newly developed products is the agreement of the contents of the five-year plan for basic research with the contents of the science and technology plans of the combines, which is to be ensured in the scope of plan adjustment (Section 7, Paragraph 6).

--In the planning process, more consideration must be given to the requirements of the dynamics of the development of the economy and science. This is served by the provisions made for the performance of the combines as well as the Academy of Sciences and universities, which foresee joint decisions on the further development of research cooperation (Section 7, Paragraph 6).

#### Commercial Contracts

As is expressed in the resolution of 12 September 1985, the new quality of the research cooperation of the Academy of Science and universities and colleges with the combines as a whole is characterized by a greater role for the commercial contract. Accordingly, through a subordination of the legal provisions of the contract law and its first implementing regulation, the research ordinance affects a provision of the commercial contracts on research

cooperation adapted to the specifics of these relations (beginning with Section 9, which includes the provisions on the coordinating contract, the contract on research and development work, the contract on the release of scientific-technical results for utilization against payment, and the contract on the joint resolution of tasks. It is characterized above all by the fact that the commercial contract is used comprehensively on the basis of the plan as an instrument for the management and organization of the process research/development/application/production through the partners in cooperation. Clearly discernible in this connection is the conceptual objective of optimizing the managerial control of this process, the linking of its individual elements, and its economic result with the help of the contract. The following points are to be stressed as special features of this regulation of the commercial contracts on research cooperation:

--On the basis of the research ordinance, the commercial contract has a broader application as a legal form for the realization of planned research tasks in the area of the Academy of Sciences and the universities. Whereas the ordinance of 23 August 1972 did not link the respective forms of implementation (commercial contract or the assignment of targets) to a certain type of task, the research ordinance stipulates that tasks of specific basic research and applied research are to be handled on the basis of commercial contracts (Section 4, Paragraph 2). The general contractual linkage of these tasks will contribute greatly to developing the corresponding cooperative relations more systematically and in accordance with the plan and to improving their national economic orientation.

--With the research ordinance, the function of the coordinating contract is expanded substantially. It is to be used to:

establish a common long-term research and patent-rights strategy of the combines, the Academy of Sciences, and the universities,

secure the research and applications with respect to personnel, material and technology, and information and,

heighten the division of labor among the partners in cooperation and organize it for the overall renovation process.

At the same time, the coordination contract retains the function--long practiced in its present application within the scope of scientific-technical cooperation--of ensuring the managerial and planning work of the partners in cooperation as well as the preparation of scientific-technical performance relations. Measures to guarantee the protection of secrecy are to be taken both in the coordination contracts (in the sense of instructions for the performance relation<sup>n</sup>) as well as in the contracts on research and development work and other performance contracts.

--The regulation of the research ordinance is oriented primarily toward a systematic meshing of coordination contracts and contracts on research and development work. It thus aims at treating the elaboration and determination of the joint research strategy (with the help of the coordination contract)

and its implementation (in the scope of performance contracts for the realization of the individual research tasks) as a uniform process.

The special importance that the legal provisions attach to the meshing of coordination contracts and contracts on research and development work is clear from the fact that the resolution of 12 September 1985 actually names only coordination and performance contracts (items 1 and 2 of the resolution).

--Higher requirements are established for the formation of the contracts.

The resolution itself indicates that the contracts are to be formed precisely and that the rights and duties of the contractual parties are to be stipulated unequivocally. The research ordinance includes detailed instructions for the agreements to be reached in the commercial contracts; it also includes as an inclosure basic requirements for the formation of the contracts in regard to research and development work. The purpose of all of these regulations is to increase the degree of specificity and the binding force of the contracts. Specific contractual agreements are also necessary, for example, for the fulfillment of the stipulation that the Academy of Sciences and the universities and colleges are to make their research results available to the combines in an applicable form (Section 4, Paragraph 2 of the research ordinance).

The previous experiences in the preparation and conclusion of commercial contracts, especially coordination contracts, in accordance with the new legal regulations reveal a number of problems. It is thus sometimes assumed, for example, that is enough merely to indicate the main areas of research cooperation with brief designations. There is thereby a failure to appreciate that it is important, "through common strategies for scientific-technical development, to establish stable bases for contractual cooperation in specific tasks of basic and applied research" (Item 1, Paragraph 3 of the resolution and Section 9, Paragraph 2 of the research ordinance). It is therefore necessary to work out common objectives and tasks of a strategic nature, to define them with the required precision, and to stipulate them contractually as a joint decision. Certain difficulties obviously also arise through the arrangement of a specific framework for the exchange of personnel and specific measures for the material and technical provision of research and its application. In the coordination contracts in this connection, merely to refer to agreements in the performance contracts does not meet the requirements. This is also true for the attempt that is sometimes made to weaken the specific commitment to introduce the research results achieved by the Academy of Sciences and the universities and colleges with provisos under which the combine takes over the transfer only "under consideration of the national economic and overall operational trends."

#### Financing

The financing regulations of the research ordinance assume that the Academy of Sciences as well as the universities and colleges are budget organizations. The research ordinance does nothing to change this method of financing. The heads of the installations of the Academy of Sciences and universities



therefore have to prepare budget plans in accordance with the existing legal regulations. The research ordinance, however, makes the form of the provision of funds dependent upon the type of tasks to be financed and links this with the commitment to be largely detached from budgetary appropriations. In detail, it stipulates the following in this connection:

--For the tasks to be resolved on the basis of commercial contracts with combines, that is, in particular for tasks of specific basic research and of applied research, public funds are appropriated for a time; these funds are to be systematically replaced by the receipts from the contractual research cooperation (Section 17, Paragraph 1, Item 1 and Paragraph 2).

--Through the decision of the minister for science and technology, public funds are applied for science and technology for tasks of preliminary basic research in the scope of the main research directions of the five-year plan for basic research, for complex tasks of the state science and technology plan affecting the national economy, for areas in which the Academy of Sciences and the universities and colleges have to carry out research in accordance with their responsibility (tasks of initiative research, for example), and for tasks that, based on agreements, must be performed for areas outside of industry (Section 17, paragraphs 4 and 5).

--Tasks in social sciences research will basically be financed from the state budget. If commercial contracts are also concluded for carrying out such tasks, then the appropriated funds are to be replaced through the achieved receipts in this case as well (Section 17, Paragraph 7).

In the scope of this financing regulation, payment through the combines is the main means of financing.

#### Pricing

In regard to pricing, the research ordinance includes the principle that agreement prices are to be set for all research tasks to be performed contractually (including the corresponding subcontractor performance) (Section 18, Paragraph 1). The calculation provisions are aimed at covering the social expense more comprehensively (contribution of the social fund, depreciation) while retaining the type of a real cost price and at stimulating and acknowledging outstanding performance through the introduction of a variable calculation element dependent upon performance and level. Some of the receipts--including the receipts from compensation for use--for which a special calculation regulation is in effect, serve as a source of financing for the formation of the rationalization fund and the bonus fund of the installations (Section 20, Paragraph 4; Section 21, Paragraph 1; and Section 22, Paragraph 2).

In contrast to the ordinance of 23 August 1972, the research ordinance provides that contractually linked tasks are to be paid without exception (Section 19, Paragraph 1). Thus the liability to pay is no longer dependent upon the position of the customer and the type of the financing source but is in effect without restriction. It is also in effect when the combines are



provided public funds (compare Section 3 of Instruction No 2 of 9 December 1985 on the application of economic accountancy in research and development).

To a considerable extent, the effectiveness of the new price regulations will depend upon the amount of success in using the instrument of the research surcharge to improve performance and thus to influence the formation of funds and incentives. Great importance is thereby attached to the careful preparation and implementation of the defenses.

#### Material Incentives

The research ordinance includes an extensive complex of provisions aimed at an effective stimulation of high creative performance. It thereby takes into account both the stimulation of the activity of the installations themselves--that is, the work of the entire operational team--and the stimulation of the individual colleague. From an operational point of view, the formation of a rationalization fund in the installations of the Academy of Sciences as well as at the universities and colleges creates better possibilities for the application of certain parts of the receipts for the tasks of installations. This fund is supplied with part of the research surcharges obtained, part of the revenue from rentals, and portions of other revenue (part of the additional receipts from the overfulfillment of the export plan targets, for example). It can be used for the extension of the material-technical base of the installations, for rationalization tasks, and--to a certain extent--for measures to improve the working and living conditions. Thus the rationalization fund offers the possibility of developing and improving the material bases and conditions of operational work as a function of overall operational work. The provisions of the research ordinance foresee two main forms of promoting personal material interest:

--stimulation with the help of the performance-related formation of the bonus funds of the installations and of the use of these funds to promote performance (sections 22 and 23),

--stimulation by means of task-related performance surcharges, which is being introduced for university and technical school graduates in the resolution of tasks of contractual research cooperation (Section 26).

The application of the forms of stimulation provided for in the research ordinance is based to a substantial degree upon the issuance of performance targets. This is especially true for the application of task-related performance surcharges. This form of performance-oriented salary formation is linked with the assignment of individual performance and efficiency targets that set forth the personal performance contribution of the individual worker. These targets are to be derived from the commercial contracts and the tasking manuals. Thus the determining factor for the efficiency of this form of stimulation is the extent to which one is successful in applying commercial contracts and tasking manuals in the operational work and research process. This puts high demands on the research director and on the level of his managerial work.

The research ordinance of 12 December 1985 established extensive possibilities for developing the creativity of the scientists and colleagues working in the Academy of Sciences of the GDR and at the universities. In implementing these legal regulations, it will be a matter of applying the means of socialist law systematically and purposefully to achieve the peak performance in science and technology that ensures further dynamic economic growth of our republic.

9746

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POLITICS

INTERNATIONAL AFFAIRS

ATA ATTACKS YUGOSLAV CONFERENCES ON ALBANIA

AU190825 Tirana ATA in English 0730 GMT 19 Jun 86

["When BELGRADE POLITIKA Deals With Albanological Sciences"--ATA headline]

[Text] Tirana, June 19 (ATA)--TANJUG Agency has broadcast from Belgrade several successive reports on the scientific symposiums and conferences on Albania and the Albanians being held in the Yugoslav capital as that organized by the Academy of Sciences and Arts of Serbia recently. The aim of this scientific interest is "to uncover" the origin of the Albanians.

Finally, after many reports and papers, which BELGRADE POLITIKA treated of broadly in its press, a conclusion was reached which was publicly reported by TANJUG Agency on June 15, 1986. BELGRADE POLITIKA discovered that the Albanians allegedly are "a mixture of Slavs, Greeks, different peoples of the Mediterranean and a small number of the autochthonous population." On the request of Belgrade this sensational discovery was sealed also by a scientist invited from London for this purpose, having a significant name Serbo-Ljub Zhivojinovic.

We Albanians, have no reason not to be satisfied with this discovery. Firstly, because our origin was uncovered. We have allegedly been Slavs. Secondly, the Serb scientists themselves refuted the old thesis of Vlladan Gjorgjevic, whom, according to the requests of the BELGRADE POLITIKA at the beginning of this century, had "proved" that the Albanians were tailed men. Now it became clear that we are Slavs, but without tail.

Such "studies," such as "science" bring to the fore more clearly the political aims of Belgrade towards Albania and the Albanians. It is common knowledge that a people, a nation which has not a past, has neither a present, nor a future.

BELGRADE POLITIKA tries to uncover the Albanians' origin not in vain, but to prove that these are people of second category, hence, they should have neither a home, nor a hearth of theirs. As it comes out, the big Serbs need this thesis to justify the policy they pursued towards the Albanians of Yugoslavia, who are treated as secondhand nationals. It is not necessary to bring forth many proofs of this. Suffice to mention the fact that as a

result of this policy, the income per capita of the Albanians in Yugoslavia are one fourth of the incomes of the Serbs, Croats and the Slavs. Unemployment in Kosovo amounts to 20 per cent, two-three times higher than in each of other republics and regions of Yugoslavia.

It is also an interesting fact that according to the "science of BELGRADE POLITIKA, the Albanian autochthonous population supposedly exists in a small number, that according to these "studies" it extends between the rivers of Mat and Shkumbin. According to them, the Albanians in other areas, beyond this zone, and especially in Kosovo and elsewhere, are settlers, guests. Perhaps do the big Serbs need it to justify that known denationalising policy of inciting the Albanians to emigrate in Turkey and elsewhere, up to their eviction from their territories, which is suggested many a times in several meetings and conferences in Belgrade? [as received]

The scientific "discoveries," make also clear the aims of the Yugoslav policy towards the PSR of Albania. Recently they in Belgrade have suggested to us many recipes on the way we should behave and what we should do so that good relations be established between our two countries. But what is said allegedly of interference in the internal affairs of Yugoslavia, the accusations made to us that supposedly Albania incites national hatred and nurtures irredentism, etc., etc., are pretexts cooked up deliberately. The Yugoslav authorities know very well that they do not hold water. The main aim, and even the suggestion coming from Belgrade, is to give up the political line we have followed these over 40 years, a line elaborated by our party with Comrade Enver Hoxha at the head, to give up that line which ensured the triumph of our socialist revolution, which guaranteed and guarantees the freedom and independence of our homeland, which brought the Albanian people from darkness into light, from poverty in the happy life.

Now, following the symposium of Belgrade, another suggestion appears "give up also the historic past, they say, accept that you are nothing, or if you want to have a past, we are lending you a hand, we are including you in the Slav family." This "scientific" suggestion is not so much unknown to us. It is an expression of that policy when they in Belgrade worked out plans to make Albania the 7th republic of Yugoslavia.

We, the Albanians, respect all the peoples. We respect the Slavs, the Romans, the Arabs, the White, the Negroes, or the Yellow. There is no case in our millenary history that the Albanian people have waged aggressive wars against another people, that their armies have fought to grab the others' territories. On the contrary, they have been compelled many a times to take up arms and fight against different aggressors, emperors, kings and tsars, who have aimed to enslave, assimilate, to wipe them out from the face of the earth.

Likewise, during all their history, the Albanian people have claimed distinction for their internationalist spirit, their love for their neighbours and generosity. And when need has been, they have sealed it with blood and sacrifices. It happened like this during the Second World War when two divisions and many other units, with nearly 10,000 Albanian partisans, on the



order of Comrade Enver Hoxha, fought side by side the Yugoslav partisans for the liberation of the southern regions of Yugoslavia from the fascist occupier. Hundreds of boys and girls laid down their young lives in these fightings. As nowhere else, thousands upon thousands of Italian soldiers abandoned following the capitulation of Italy were sheltered in the Albanian families and were protected by them risking even their lives from the Nazi fury and massacres. Albania is perhaps the sole country in Europe, where the German Nazis captured no Jews, because the Albanian people sheltered them in their homes, hid them from the Nazis and defended them as their own sons. We are proud of this great humanitarian spirit of our people, of the great internationalist deed of their sons.

These are the historic traditions of the Albanians. The Albanian people have been and are for friendship with the peoples. They have been and are for good neighbourliness with the neighbouring countries. We have been and are for such relations even with Yugoslavia. If the Belgrade leadership, for its own reasons, does not want such a thing, this is its own affair. But it must not try to justify its own stand by attacking and making stale charges against socialist Albania and the more so to think that it will draw profits from this stand, even in the field of "historical studies" at the expense of the Albanians and the PSR of Albania.

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## ATA ON GORBACHEV'S 'DEMAGOGICAL' DISARMAMENT PROPOSALS

AU181322 Tirana ATA in English 0945 GMT 18 Jun 86

[Text] Tirana, June 18 (ATA)--In a recent speech, Mikhail Gorbachev repeated the demagogical proposals on allegedly disarmament, giving other details on them. By grouping his proposals in three directions, such as the anti-ballistic missiles, space demilitarisation and the strategic weapons, Gorbachev proposed his rival, the U.S.A., to make tests for the militarisation of space in laboratory conditions and to restrict the strategic armament.

But precisely for these three directions the two superpowers, the Soviet Union and the U.S.A. are in a feverish armament race. The antiballistic missiles are being produced in great numbers both in the Soviet Union and the U.S.A., sometimes overpassing the limits set by the ABM Treaty. The space militarisation has become one of the main military goals of the two superpowers, whereas the strategic weapons are being increased en masse, the old ones are being replaced by new Soviet "SS-25" missiles, or the "Trident" submarines and "B-52" bombers equipped with "cruise" missiles of the U.S.A., etc. Another evidence are [as received] also the frequent maneuvers that the U.S.A. and the Soviet Union are conducting in order to perfect these weapons such as the new military maneuvers of the Warsaw Treaty, with the participation of the marine forces and those of infantry of the Soviet Union, Poland and German Democratic Republic. The object of these maneuvers, as it comes out from the reports of the news agencies, is "the further perfection of the work of staffs and coordination of the military activities between the military-naval forces and those of infantry". [quotation marks as received]

Such demagogical proposals on allegedly disarmament, at a time when armament race is fiercer than ever, are needed by the Soviet Union and the U.S.A. for propagandistic aims.

/6662

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POLITICS

ALBANIA

ALIA SPEECH AT TIRANA YOUTH RALLY

AU161415 Tirana ZERI I POPULLIT in Albanian 7 Jun 86 pp 1-2

[Speech by Ramiz Alia, AWP Central Committee first secretary, at Tirana youth rally on 6 June]

[Text] Dear comrades, young men and women: When the comrades of the youth organization's Central Committee invited me to attend this festivity, I was wholeheartedly pleased. But this joy is redoubled now that I am meeting with the representatives of all the generations of young volunteers, with those who have contributed and are contributing so much to the construction of socialism in Albania, now that I am among you at this enthusiastic and beautiful manifestation.

It is a great pleasure for me, while receiving your message, to bring to all of you, to all the young generations of our country, the ardent greetings of the AWP Central Committee. I would like, first of all, to greet the volunteers of the first actions who, through their enthusiasm and sacrifices, opened up the way to this valuable tradition of your youth. I would also like to greet and thank particularly our present-day youth of mass actions who have come to this hall from the Milot-Reshen railroad and other projects; I would like to greet and to thank all those who are shouldering communist work and who are giving vitality and dynamism to the country's entire life. From this hall I direct myself with the most cordial greetings and congratulations to our young workers and cooperativists who are in the frontline of our efforts and distinguish themselves with their lofty example; I direct myself to the young people in the schools and in the army with best wishes for new successes and victories.

The comrades of the youth organization's Central Committee have done well to organize the relay baton of actions, which have been and continue to be a great school for all our young people. The passing of the relay baton through a succession of actions undertaken by our young generations since the first postliberation years up to the present has provided vitality and has stimulated a new emulation among our younger generations and has further strengthened a militant spirit and a love for work. Moving from one corner of the country to the other, our young people have witnessed the colossal contribution made by previous generations of action volunteers, and have

also felt the vitality of our present-day generation and the great confidence that the party has always had and continues to have in the younger generations.

The message that you have brought today to the AWP Central Committee is another solemn pledge of the young men and women of Albania to march resolutely and united on the road of actions. It reflects and synthesizes the strong desires of our heroic youth, its fervor and readiness for creative work, its lofty awareness of the ever greater tasks to be carried out.

The young people of today are the successors of those who fought in the National Liberation War and who rebuilt the country, of those who fulfilled the first 5-year plans and who laid the foundations of the new Albania. They are not only worthy inheritors of the magnificent deed of those heroic men and women, but also fiery followers of their revolutionary ideal.

The party, our society, our people, rejoice at this and are proud. They are very happy that our boys and girls appreciate and further perfect the lofty patriotic and revolutionary virtues of the glorious National Liberation War, the invincible freedom-loving spirit and spirit of sacrifices of its fighters, their great sense of historical responsibility for the country's destiny, their civil courage and personal bravery.

They rejoice at the pure spirit and sound character of our youth, its high morality and good behavior, its great love for work; they rejoice at its cultured life. Love for the country, for the brilliant historical traditions of our people, for their freedom-loving sentiments and invincible character, respect for the national culture, the mother tongue, the contribution that the people of our territory have made to Albanian and European civilization--all these are firm traits of all our young people.

It is the duty of the party, of our schools, of the youth organization, and of our whole society to work tirelessly to ensure that these patriotic and revolutionary traditions inherited by our youth should never become rusty, that these new virtues of socialist morality should never be soiled under any circumstances, that the fervor of youth should never be halted. They must work tirelessly so that every new generation of Albania may leave indelible traces in the country's history, may raise the glory of our socialist country to ever greater heights, and may further the communist ideal of the preceding generations.

Dear comrades, the party is receiving your valuable message in a sound internal situation characterized by unprecedented enthusiasm and optimism. The might of the moral and political unity of our society has been raised to a new and higher level. The workers and cooperativists, the cadres and leaders, incorporated in the movement "Standard-bearers of the implementation of Comrade Enver Hoxha's teachings," and in the framework of the preparations for the Ninth AWP Congress, are tackling their work confidently and are successfully fulfilling the tasks in this first year of the new 5-year period. Production plans have been and are being fulfilled better than ever before.



A firm belief exists everywhere concerning the inexhaustible possibilities of our country to progress rapidly. The spirit of initiative and independent action of the working people is growing, not only with regard to innovations and technological improvements, but also in the direction of more fruitful organization.

The propitious development of the economy and the sound moral-political situation has made the country's defense, which is continually at the center of the party's attention and in the sure hands of the armed people, stronger than ever. At the same time Socialist Albania enjoys a good reputation, as well as respect and sympathy among the peoples and progressive individuals throughout the world.

All these successes, dear comrades, indicate that, with ever-rising achievements and successes, our people are advancing on the brilliant road of the party in accordance with the teachings of our legendary leader. Comrade Enver Hoxha.

Throughout our entire struggle for the constitution of socialism, mass actions have been one of the loftiest expressions of the enthusiasm, fervor, and determination of the young generation in the revolutionary transformation of our society. The party and Comrade Enver have always had a high appreciation of the great values of youth actions, not only because their economic value, nor merely because of the great organizational experience gained in the course of these mass actions, but primarily because of their great political and educational values. Actions help to develop a spirit of initiative and competition, emulation and independent action, a spirit of solidarity and collectivity, a spirit of sacrifice, a sound youthful romanticism, and pure comradeship and friendship. The large national actions, in particular, join together and promote friendship among young boys and girls from all the regions of Albania and are transformed into schools of revolutionary tempering. Mass actions create the possibility of tackling the resolution of various problems of the economy through concentrated actions, particularly in the case of the larger construction projects. In addition, they promote a militant spirit for the communist education of young people, and strengthen their links with the school of life.

Youth has always returned from these actions with a greater life experience, and numerous contingents of qualified workers and specialists have continually emerged from them. By their participation in mass actions young people have linked themselves more closely with their socialist country, with other people, with the new projects to whose construction they have contributed. Hundreds of thousands of young people have participated in the national actions alone, in the construction of major projects, but their example has always given a strong impulse to society as a whole.

Let us continue to increase our mass actions in the future, let us increase their range in all fields of life, let us organize them even better, let us consolidate and transform them into a permanent method of our constructive and educational work.

Comrades, particular tasks confront people at every stage of the country's development, confront the generations with great and difficult tests. The burden of resolving these tasks usually falls on the younger generation which, at the given stage, matures and becomes the nation's main creative pillar. Naturally, it is the generation that has been spiritually and mentally trained for this mission, which can shoulder the heavy historical burdens, which can promote the country's progress.

It is precisely with this consideration in mind that the party proceeds when it demands that and works so that the young generation of socialist Albania be politically and ideologically educated, that it grow up morally sound and physically strong. The party wants young people to be interested in current political developments and ideological struggles, in economic processes and cultural achievements. But the party also demands that this interest should never be a superficial and passive one; on the contrary, it should come as a result of an inner need and demand on the part of young people wanting to know the present and to understand the future.

This is one of the reasons why the party insists that the political and ideological education of young people at school, in the army, at work, and everywhere else, should never fall into didacticism and should not take the form of abstract moralizing, but should be a fulfillment of the great thirst of young people to know and understand the world, to know and to understand the laws of its development, to know and to understand where we came from and where we are going.

When we look at what is currently happening in the capitalist world where millions of young people drift about unemployed, where crime, drug addiction, and massive degeneration among young people are causing havoc, where the horizon of their future is being increasingly obscured with every passing day, it is possible to understand better and more profoundly the sound and secure life that the AWP has created in Albania with its great leader and teacher, Enver Hoxha, it is possible to see more clearly the brilliant prospects that have always existed and will continue to exist for our boys and girls.

There will never be "lost generations" in Socialist Albania, there will never be generations of young people who are banished to the edge of society, there will never be uncertainty of the present and fear of the future. The youth of Socialist Albania is and will remain the inexhaustible source of new blood for our society and its future, a vital force, conscious of its mission, and an impregnable shield of the revolution and socialist victories.

Therefore, comrades, let us work together, all of us, young and old, to defend and make prosper our socialist life, to preserve and to strengthen the vitality of our working people, their militant spirit, their readiness and their determination to implement the party's line and its teachings.

Guided by the party and Comrade Enver Hoxha's teachings, the youth of our country and its militant organization, the Union of Working Youth of Albania,

have remained during these past 40 years of free life not only in the front line of the battle for the country's socialist construction, but also in the struggle to throw overboard the old customs inherited from the past, in the struggle against feudal mentalities and the moral deformations of the bourgeois society, against the dissolute and degenerate influences of the present-day capitalist and revisionist world. They were the first to embrace the norms of socialist morality, to defend and perfect them. Our young boys and girls were in the front line of the struggle to create our new man, emancipated from the prejudices of the old exploitative society and the heavy ideological shackles of religion; our new man, equipped with a totally free inner life, civilized and cultured.

The successes in this field are considerable. They are by now well-known and perceived by everyone. But I would like to stress that the struggle against the relics of outdated ideologies and alien manifestations is a continuous one. Although defeated, a number of alien manifestations have a tendency to revive themselves under given conditions, adopting varied forms. This is the reason why the party has constantly called for a consistent and continuous struggle against manifestations of liberalism and bureaucracy, lack of responsibility and indifference, the pursuit of narrow personal interests, and so forth, which, if tolerated, become a suitable breeding ground for the genesis and development of phenomena that are degenerative for socialism and its people.

By its very nature, its very demands concerning the future, and its predominant political and ideological education, the young generation does not reconcile itself to these manifestations. Properly appreciating the dangers arising from conforming to these manifestations, our young generation is therefore keeping alive the ideological struggle against everything that goes against our communist morality and ideology.

The worst disease which may infect young people, particularly school-attending youth, is that of seeking the easy road in life. Undoubtedly, in the initial periods, the subjecting to discipline and rules, the tiring and persistent effort to learn, to master knowledge and skills, the various limitations imposed by society, and so forth, are not all that pleasant. But the desire to emerge in life through the easy road is of no use in finding daylight. Someone may benefit from it, may even find himself some quiet corner, but this is temporary. Society will always seek out and appreciate those who are more devoted, more industrious, more knowledgeable, those of stable character. The young people, their parents, and their relatives, must therefore not think for the day, but for the great life that lies ahead.

Easy roads, which lead to irreparable damage to the character, can be reconciled neither with the spirit of a communist revolutionary and militant nor with the proud nature of truly Albanian men and women, with their indomitable pride and their efforts to build a worthy and unsoiled life.

Our schools, the youth organization, the party's propaganda, all the institutions that are concerned directly or indirectly with the education and

training of the younger generations, and our young people themselves, must fight to create correct concepts and mentalities about life, work, and society. They must never allow themselves to be subdued by petit bourgeois pressures or sickly sentimentalisms. The defense of the party's principles and the ethics of our society is the defense of the young generation, of the cause of socialism in Albania, of the future of our country.

Our young people have a great thirst for art and culture and are interested in the attainments in this field. They constitute the most numerous section of readers of artistic and political literature, and they are the most passionate admirers of music, paintings, movies, the theater, architecture, and so forth.

But they are under no circumstance passive consumers of literary and artistic products, as some may think. The youth have great intellectual sentiments and a close relationship with what is new, beautiful, achieved, and perfect. They therefore have the right to demand from the masters of art and culture good works, creations that enrich the mind and cultivate noble sentiments, works which correctly explain and interpret current social phenomena, works which illuminate the future. In literature and the arts young people wish to find out how their contemporaries work and struggle, they want to find out about the concerns and preoccupations of the society in which they live, they wish to understand the genuinely positive processes of its development and the various obstacles hindering it. Young people want to find inspiration from literature and the arts, they want support for their own development, they want to confront and verify their own ideas, and they seek aesthetic pleasure, but also new information emerging from a profound analysis and a precise generalization of human and social relations.

Every book, every artistic performance, every cultural activity is viewed by young people as an important event and their attitude toward them is extremely serious and respectful. That is why they cannot reconcile themselves to mediocre artistic works, the formalism of cultural activities, superficiality of substance, and the lack of professional ability on the part of the their authors. This irreconcilability increases with the level of education and culture of our youth, in proportion as they become acquainted with the treasures of our national culture and of progressive international culture.

Our young people have therefore the right to demand more quality from literature and the arts, more care and creativity from the people working in the cultural sector. Young people, on the other hand, must express their opinions courageously whether it is a matter of affirming good values or of criticizing superficiality and routine, which are still to be encountered in some literary or artistic works or in cultural activities.

The question of recreation for young people must also be dealt with on the same plane. This problem must not be underrated. There are managers who fail to fulfill the tasks concerning recreational facilities for young people and who look upon this question, if not with indifference, then as a secondary matter.



Recreation is like culture. In the same way that there is genuine culture, there is also sound recreation. In the same way that decadent and degenerating culture exists, recreation of this type exists, too. But the latter has nothing to do with a socialist society, with our norms and principles. We have always been and continue to be in favor of sound, cultured, varied, and positive recreation. We want it to be recreative and inspiring at the same time, as well as enjoyable, ennobling, and mobilizing. Contrary to the bourgeois world, we do not look at recreation as a means to dampen youthful fervor, but to encourage it; recreation is not viewed as a way of "burning" free time, but of filling it with joy. The comrade directors of enterprises and schools, the managers of agricultural cooperatives, commanders of military units, and leaders of the youth organizations should think about the recreation of young people in the same way that they rightly demand from them discipline, work, and industry. More understanding and initiative is required in this matter, the existing material base must be used more fruitfully, as well as the funds allocated by the state and society for this purpose.

The young people of our days are entering life at a time when there is a rapid development of science and technology, when knowledge becomes quickly outdated, and when great effort is required to keep pace with time. Strong will, persistence, and sacrifices are needed to keep up with the pace imposed by the development of the technical and scientific revolution of our time. Are our young people willing to meet these demands, to respond to the imperatives arising in this field? I believe so. All the social and material conditions exist, enabling young people to enthusiastically and efficiently tackle science and technology.

The socialist society, its Marxist ideology, and the party's correct policy have created the conditions in which young people may develop their talents without obstacles, in which they may show their passion for science through their work, and, above all else, for their contribution to be acknowledged and appreciated.

When we talk about science, know-how, and technology, we have a broad concept of all this. They have now entered into every branch and are applied not by a few people, but by thousands of them, by broad masses of people. There exists no modern production process, whether in industry, agriculture, construction, communications, medicine, or in any other field, which can be promoted without special and skilled technical-scientific knowledge. Therefore, the better trained the cadres and workers are, and the closer their cooperation is, the more progress will there be, including progress in science and technology.

Young people are prepared to master and have no prejudices concerning mastering and applying scientific achievements. They turn to what is new in a natural way, in the same way that they struggle with passion and love to master and implement what is new. It is the duty of the mature generations to open up the way to these desires and passions, to direct and orient them correctly and confidently, to struggle together with the younger

generations to eliminate potential bureaucratic obstacles. When youth's fervor joins forces with experience of life to attain a given objective, then there are great results.

Dear comrades:

This meeting of the generations of youth volunteers has been of great value. The experience of the more mature generations is valuable and encouraging for the younger generations. But contracts with young people are always valuable for the veterans themselves. Everyone may benefit from the fervor, energies, enthusiasm, and militant spirit of youth.

It was a particular pleasure for me to meet with you and acquaint myself with your views. Communists and all the working people need the fresh ideas of youth. These are ideas of vitality and enthusiasm which strengthen confidence in the country's future. This is natural. The generations inspire and support each other to further the party's magnificent deeds, socialist construction, and the country's defense and prosperity.

Long live our heroic youth!

Long live the Albanian Workers Party!

Glory to Comrade Enver Hoxha's immortal deeds!

/6662

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POLITICS

ALBANIA

BRIEFS

**MARKO MEETS GREEK PARLIAMENTARIAN**--Tirana, June 20 (ATA)--The vice-president of the Presidium of the People's Assembly of the People's Socialist Republic of Albania, Rita Marko, received on June 19, the deputy of the Greek Parliament, former minister of the Greek Government, Anastasios Peponis, who is staying in our country for several days, at the invitation of the Albanian Committee for Culture and Friendly Relations With Foreign Countries. Attending the reception, which passed in a warm and friendly atmosphere were the vice-chairwoman of the Presidency of the People's Assembly Victori Curi and the chairman of the Albanian Committee for Cultural and Friendly Relations With Foreign Countries, Jorgo Melica. Present was also the interim charge d'affaires of the Embassy of the Republic of Greece in Tirana, Nikolaos Chrysogelos. [Text] [Tirana ATA in English 0730 GMT 20 Jun 86 AU] /6662

**CAMI RECEIVES SPANISH MARXIST-LENINISTS**--Tirana, June 10 (ATA)--From May 28 to June 4, 1986, a delegation of the CP of Spain (Marxist-Leninist) made up of Comrades Raul Marco, first secretary of the Central Committee of the party, leader of the delegation and by Manolo Blanco Civite, secretary of the Central Committee paid a visit to Albania. The delegation was received at the Central Committee of the AWP where talks were held in the atmosphere of a comradely discussion and of internationalist relations, on problems of common interest for the two parties. Attending the talks were Foto Cami, alternate member of the Political Bureau and secretary of the Central Committee of the AWP, and Agim Popa, director of the Foreign Department of the Central Committee of the party. The delegation left our country. [Text] [Tirana ATA in English 0735 GMT 10 Jun 86 AU] /6662

**NEW ENVOY TO SWEDEN**--Tirana, June 11 (ATA)--The ambassador extraordinary and plenipotentiary of the People's Socialist Republic of Albania in Sweden, Shpetim Caushi, presented the credentials to the king of Sweden, Karl Gustaf, on June 10, 1986. The ceremony of handing over the credentials was attended by the great ceremony master of the Royal Court, Askel Levenkupt the first court marshal, Lenart Asren, the court chamberlain, John Petersen, the director of the protocol department at the Foreign Affairs Ministry, Goran Haselmark and others. [Swedish names as received] [Text] [Tirana ATA in English 0735 GMT 11 Jun 86 AU] /6662

NEW AMBASSADOR TO KUWAIT--Tirana, June 20 (ATA)--The ambassador extraordinary and plenipotentiary of the People's Socialist Republic of Albania in Kuwait, Alkylz Cerga, presented the credentials to the emir of Kuwait, Abir al-Ahmad as-Sabah on June 18, 1986. [Excerpt] [Tirana ATA in English 0920 GMT 20 Jun 86 AU] /6662

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POLITICS

POLAND

KUBIAK QUERIED ON POLITICAL ROLE, 'FAILURES,' 9TH, 10TH CONGRESSES

Warsaw POLITYKA in Polish No 25, 21 June 86 p 10

[Interview with Hieronim Kubiak, Member of the PZPR Politburo, by Chudzinski, Kubiak, Rydzewski and Urbanczyk: "Politics Is a Profession"]

[Text] Hieronim Kubiak, a Jagiellonian University professor, and a member of the PZPR Central Committee's Politburo since the IX Congress, granted an interview in the series "Three on One" (ZDANIE No 5) and was very candid in answering questions regarding the beginnings of the Ninth Party Congress, the way its resolutions were (or were not) carried out, his own role in this, and thus the course of his own political career. We are publishing here some excerpts from this comprehensive and extremely interesting interview, which includes some very personal political notions.

[Rydzewski]: There is something that interests me. A new person appears, somebody who has no experience in the realm of high-level politics, but at the same time he has some theoretical knowledge on the subject of society and politics, and he is professionally sensitive to social phenomena, conflicts, and divisions. How did Kubiak the sociologist behave in all this?

[Kubiak]: In the worst possible way, because alongside participation in all these meetings and pressure from a flood of information, I became more and more convinced that basically what I know as a theoretician is not very useful in analyzing concrete reality under concrete conditions here and now. Perhaps because of not synthesizing enough the knowledge about our own reality?

I constantly even now hope that it is obvious that rational thinking outweighs any other way of reaction, that even it is extremely difficult for an understanding to be reached but there are parties who wish to reach

an agreement, then ultimately an agreement can be reached, on the basis of rational thinking.

[Rydzewski]: You were not the only one to believe in that then...

[Kubiak]: My tragedy began the moment that the national agreement turned out to be running more slowly than the reasons of state called for. For example, I tried to restore normal functioning to the creative bodies, like ZASP, without any preliminary conditions. There was a week of peace, a week of hope, but by the second week it was already evident that this had been a mistake.

[Urbanczyk]: You, a sociologist, made such a mistake?

[Kubiak]: Unfortunately, more than once. I do not know whether the ultimate result would have been different had there been somebody else in my place, somebody with greater experience, greater personal moral authority, and a clearer head.

[Rydzewski]: In the face of the irrational nature of the situation did your rationalist position have any chance at all?

[Kubiak]: At any rate I proved ineffective. I lost.

[Rydzewski]: But because understanding wins the day, emotion and strength remain?

[Kubiak]: Yes, but for a short time. And ultimately. That is why, because of the force of argument I held out against the argument of force throughout the span of the authority I possessed. That is why such means were not used or were used only after the alternatives which I among others offered to resolve the conflicts proved ineffective.

[Chudzinski]: Do you mean that this was the cause of your downfall?

[Kubiak]: I mean that up to the very end I believed in the possibility of a solution that did not use force. I did that to the end, using all the means at my disposal. Unfortunately, without the needed results. I cannot stop reflecting on whether I made a mistake and whether therefore it would not be a smaller loss for the public interest if I had simply not been there in those dramatic months...

After martial law was declared, I consistently defended it without reserve or any lack of conviction, using all the intellectual and emotional means available to me. But I cannot say that I wanted to accelerate it in any way, because that would not be true. And I cannot say that I was relieved when it was announced. For me it was a tremendously dramatic thing. Do you know what my evening reading at the time was? Lemowski's "Return From the Stars."

[Chudzinski]: When did you come to realize with certainty that martial law was inevitable, having, of course the special knowledge that comes with your participation in party leadership?

[Kubiak]: I would like to be somewhat precise in answering that. I think that the days following 4 November decided me, once the summit meeting did not produce any result and not everyone wanted to sit down at the table again under the only conditions possible, the conditions of Polish reasons of state.

[Rydzewski]: Let us go back to the moment of your departure as secretary of the Central Committee.

[Kubiak]: To be honest up to the end, this was not just because of my readiness to leave but also because of earlier criticism that was severe and painful, painful because criticism from one's own ranks hurts the most. It is all the more painful when it is also criticism that uses means which must not be accepted under any conditions -- I have in mind the handouts signed by the so-called Movement for the Defense of the Socialist Fatherland (Ruch Obrony Socjalistycznej Ojczyzy), and these flyers even wound up in the cafeteria of the Central Committee or right in the meeting hall during some of the plenary sessions...

[Chudzinski]: And what do you consider successes of this period? You have already mentioned the cause for the failures.

[Kubiak]: If you ask me about my successes, then, to put it not in personal terms but in terms of the long-range social role I played, the most important thing for me proved to be something that did not lead to a spectacular success. I am thinking here about the direct calming of the society, the national understanding, and something that is still an extremely important element, a certain foundation upon which national understanding may still be constructed, because after all the National Culture Council came into being, as did the Fund for the Development of Culture. The Sejm ratified the Teachers Charter, and it also adopted a bill on self-government in the institutions of higher education, which is not and must not be an alternative to the socialist system but on the contrary must grow out of its essence. A number of steps were also taken to protect culture and the groups working on its behalf, such as the State Fund for Visual Arts Purchases and the like.

Therefore a whole legal system to regulate important spheres of social life and put it in order has come into being.

In addition I think that I can include as part of my personal success the creation of the program to save the Polish book...

[Rydzewski]: So looking from that perspective you do not have a sense of defeat?

[Kubiak]: Absolutely not...

[Rydzewski]: As a novice you had to pay the price of experience, which usually happens when amateurs come among professionals.

[Kubiak]: I do not agree with your analysis, because I do not think that I lost because I was surrounded by professionals who wanted my defeat. Of course I cannot exclude such a possibility in one case or another. I lost not because somebody among them was against me but because I was not able to come to an agreement with those with whom an understanding had to be reached in order for my concepts to be carried out.

[Rydzewski]: But maybe the reason you could not reach that understanding was because you were new to politics.

[Chudzinski]: I am not going to defend Hieronim Kubiak, because he can do it better, but it does not seem to me here to be a question of being new to politics. We are interviewing a sociology professor whose knowledge of politics and power mechanisms is incomparable with that of your everyday "professionals" taking part in the political game. I think that what was decisive here first of all was the lack of experience in exercising power at such a high level. And the second thing -- and this is a far more important reason -- is that his conception lost out when it came up against the realities which led up to martial law and finally martial law itself.

[Rydzewski]: Heavens! I am not calling into question Hieronim's competence as a political scientist. I am just saying that this was theoretical knowledge that in practice...

[Kubiak]: More and more frequently I am coming to the conclusion on the subject of the social sciences -- and this is a terrible conclusion-- that at best they can indulge in predictions about the future and be more or less successful, but with regard to the present day, especially in terms of very short periods of time, the social sciences show themselves to be helpless...

[Urbanczyk]: Where is the line of shared responsibility in the party machinery between the groups that create programs and those that execute them? It was right at the Ninth Party Congress that it was demanded that the deciding voice reside with the elected groups, such as the Culture Commission, with regard to cultural matters, rather than the Central Committee's department of culture.

[Kubiak]: In the sense of programs, it is surely the committees that are the most important, but it is extremely difficult to draw the line between the executive machinery's own execution and creation of norms.

[Urbanczyk]: The way you put it is full of nuances.

[Kubiak]: ...which are very important in executive practice.

[Chudzinski]: You said that you left, because it did not come off for you.



What has changed in the position for which you were responsible? And in this connection what are the feelings of a Politburo member who continues to share the responsibility for cultural policy which is no longer the policy which he tried to carry out, with the known result?

[Kubiak]: If you are thinking about me, things are not like that. What changed were the means for carrying out the policy, not its principles, because the latter were established at the Ninth Party Congress, and they have to be taken into account. I am ready to take full responsibility for carrying out those principles, but the means of carrying them out had to change, because effectiveness is what counts in politics. Did the means used after my departure prove effective? Effectiveness can be measured only within a given context, in relation to concrete actions. Some of them were undoubtedly effective and, in the good sense of the word, important to the development of national culture. Some actions produced lesser results, but I do not think that I should be more analytical in answering the question.

[Rydzewski]. I am going to be stubborn in going back to the question of being amateur or professional in politics, because I think that your amateur standing by no means consists of any lack of political knowledge but rather consists of a lack of skill in playing the game of politics.

[Kubiak]: Let us explain one thing at a time. First, one becomes a politician as the result of personal decision, regardless of whether one has risen to political heights because of a fluke or whether one has spent years climbing to the top. I am emphasizing this fact, because being a politician is inseparably linked to the question of one's personal acceptance and responsibility. Second, being an amateur is no excuse. Third, politics is a profession, and for this reason it can be learned (and under certain conditions even must be). Fourth, politics does not have to be immoral, although in politics many sociotechnical devices of questionable morality are employed. I even became familiar with some of them.

[Urbanczyk]: But did you yourself use them in practice?

[Kubiak]: Listen, I cannot pretend to be an idiot in front of you and say that in playing political roles I never used the techniques ascribed to politics. Ultimately I managed to, as the professionals put it, "force" some things. After all it is often easier to convince the so-called decisionmakers than it is the people who will determine the fate of the various legal solutions later. I will mention here once more my experience with the higher education bill.

I will return for a moment to the issue of "being a politician." For us the difficulty in playing this role consists mainly of the fact that our sociopolitical system has awakened aspirations which it cannot satisfy. This is why you would often have to be a miracleworker to meet society's expectations.

[Urbanczyk]: And without miracles even the most urgent needs cannot be met? Looking from that point of view, what will the Tenth Party Congress have to offer the society?

[Kubiak]: The congress will be whatever it wants to be. I want to awaken the party intellectually and morally, and to find effective instruments for carrying out the program for which the Ninth Party Congress laid the framework.

[Chudzinski]: Is the intellectual sluggishness we see at present not the result of the fact that we actually do have a program but the whole stumbling-block lies in the fact that for various reasons there is not the know-how to put it into practice?

[Kubiak]: There is no justification for intellectual sluggishness, wherever it exists. The Ninth Party Congress came out for profound economic and political reforms, but the next congress must decide on a specific economic strategy and methods of exercising power, to prevent any further distortions in the system.

[Rydzewski]: The report of the commission you chaired ends with a message for the future.

[Kubiak]: Working on this report I was conscious all the time that it only had the appearance of a document on the past. Actually, after this document is published, no party or state leadership body will be able to say they did not know. At most, they will be able to say that they too were wrong.

[Chudzinski]: From the viewpoint of social effects that is a small difference.

[Kubiak]: On the contrary, it is an important difference.

[Chudzinski]: How?

[Kubiak]: If a politician says: "I was wrong," and at the same time shows the mechanisms for the error and forges the opportunity to correct the system to reduce the possibility of the error's being repeated, then not only is there a change in the people but the causes of the phenomena being criticized are also removed. Therefore this is not just a game with words...

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POLITICS

POLAND

# PHILOSOPHY JOURNAL CHARGED WITH SHORTCHANGING MARXISM

Warsaw MYSL MARKSISTOWSKA in Polish No 2, Mar-Apr 86 pp 135-141

[Article by Tadeusz Jaroszewski: "The Absence of Marxism; Comments on the Monthly STUDIA FILOZOFICZNE (1983-1985)"]

[Text] STUDIA FILOZOFICZNE is the leading periodical of the philosopher community in Poland. Its editorial direction, both formally and on merit, may thus markedly influence the situation in that community by stimulating either positive or negative tendencies. Thus, no Polish philosopher can remain indifferent to that direction.

Moreover, Marxist circles are interested in the manner in which STUDIA FILOZOFICZNE presents the philosophy of dialectical materialism, both in quantitative terms and in terms of the cognitive value of the materials published on this topic. This very concern underlies the reflections and comments below.

Let us begin with formal-editorial matters. STUDIA FILOZOFICZNE is a periodical published by the State Publishing House on the initiative of the Committee on Philosophical Sciences of the Polish Academy of Sciences [KNF PAN] and the PAN Institute of Philosophy and Sociology, and edited by a team directed by Prof Dr Habilitatus Michal Hempolinski (editor-in-chief). The periodical is supposed to be published once a month, but actually many so-called double issues are printed. Circulation averages 2,500 copies and the price (recently) is 120 zlotys a copy.

In 1983 eight issues were published, including four double issues (Nos 1-2, 5-6, 8-9, and 11-12), although properly speaking only two issues (Nos 5-6 and 8-9), containing 31 editorial sheets each -- as compared with the approximately 20 sheets per normal issue -- can be considered double issues, and only partially at that. The remaining double issues are double in name only. The publication of as many as four double issues in one year may be justified by so-called organizational-editorial or printing problems but is not otherwise warranted, since only issue No 5-6, containing materials on a scientific conference of the KNF PAN warranted including in a single larger issue many papers dealing with a particular thematic subject ("Reason--Rationality"). For example, in the case of papers devoted to the philosophy of Karl Marx on the occasion of the centenary of his death, that centenary was

not used as an occasion for publishing a thicker issue. As a result, part of the papers, not all of them the most valuable, was published in an issue of ordinary size, and another part scattered over other issues. In 1984 12 issues were published and in 1985, so far 10 issues, two of them being double.

The periodical is being edited with some elan and organized quite logically; the editors use various forms such as exegeses, scientific essays, chronicles, reports, book reviews, and notes. From the technical-editorial standpoint (aside from considerable publication delays which often reach 8 months), the performance of the editorial team evokes no major reservations. The material is carefully prepared for printing and provided with brief excerpts and summaries in the English language; proofreading is of good quality; notes and attributions are provided properly; and the printing fonts are properly selected.

When considered on its merit, however, this periodical evokes reservations.

I would include among its indubitable accomplishments the following: 1) broadening of thematic range -- formerly the periodical published chiefly materials on this history of philosophy and philosophical anthropology, along with occasional literary essays, whereas now it also deals with problems of the philosophy of science, cosmology, informatics, the cybernetic model of reality, theory of cognition, methodology, and, recently as well, ethics and aesthetics, or the general theory of value; 2) the relatively high level of the materials it publishes -- formerly it published many immature "debuts" and impressionistic essays bordering at belles lettres and unsupported by solid research apparatus or, conversely, excessively photographic articles on various domains of particular disciplines (chiefly the humanities), that failed to attain the level of philosophic generalization or epistemological-methodological reflections on the research fields concerned.

It is the thematic propositions and certain attitudinal options followed in this periodical, on the other hand, that evoke doubts. So far as the former are concerned, the periodical still does not deal with problems of the philosophical theory of reality (ontology), and particularly of philosophical materialism. It publishes too few papers dealing with dialectical methodology.

In presenting the history of philosophy the periodical places emphasis on religious thought, idealist thought, and various forms of agnosticism omitting the materialist tradition (a positive exception is the articles by Marian Skrzypek on the thought of the Enlightenment). On the other hand, it published many materials devoted to phenomenology (particularly that of Husserl and Heidegger), existentialism (chiefly religious, in Kierkegaard's version), German turn-of-the-century Neo-Kantianism and, more broadly, concepts of the so-called "humanist" turning point in German philosophy. Here, what matters to this reviewer is not at all that a special issue is devoted to, e.g., to the philosophy of Plato or Aristotle, or that the periodical publishes essays on the ideas of Dilthey, Rickert, Simml, Hartemann, and Spengler, and also Husserl, Heidegger, Jaspers, or Kierkegaard. No, this reviewer is chiefly concerned with proportions, and principally that the periodical should devote equal space to, e.g., the thought of Democritus, Heraclitus, Lucretius,



Epicurus, Vanini, Galileo, Giordano Bruno, Spinoza, Condillac, d'Alembert, Holbach, Helvetius, Feuerbach, Renan, Chernyshevsky, Dobrolyubov, Plekhanov, Lenin, N. Kamensky, L. Krzywicki, or S. Rudnianski. And lastly, it is a concern to this reviewer that the periodical should present papers on various currents in idealist or irrationalist thought in a critical and penetrating manner, and that it should publish more polemical papers as well as more papers devoted to scientific discussion.

Also evoking reservations is the minimal presentation of accomplishments of world and Polish Marxist thought in that periodical. The year 1983 was the year of the Marx's centenary. Hence, in addition to a couple of articles in other issues, the periodical published a special issue. But the organization of that issue evokes reservations. It lacks solid papers devoted to the dialectical materialism of K. Marx, his theory of reality (ontology) and theory of cognition, and his views on the methodology of scientific research. It also lacks materials on the influence of Marx's thought on contemporary science and culture, as well as on contemporary Marxist discussions. The lead article in that centenary issue represents an excerpt from the par excellence political brochure by Adam Schaff, "Ruch polityczny na rozdrożu" [The Communist Movement at a Crossroads], which evokes many major reservations. A much more suitable lead article would have been the highly interesting paper by M. Fritzhand, "Marxian Ethics and Marxist Ethics," or one of the articles by other well-known authors that were published for some strange reason in subsequent issues of the periodical in that year [rather than in the centenary issue].

Formally, the double issue No 11-12 of 1985 also is devoted to recent history of Marxist thought; it contains part of the materials of the session on "The Presence of Marx in the Philosophical Culture of the 20th Century" (the editors intend to publish second part of materials of that session in issue No 1, 1986). I write, "formally," because a substantial part of the materials published under that overall heading contains rather peevish comments about supposed shortcomings of Marxism and discusses the need to complement the philosophy of dialectical materialism with new approaches or a fundamental revision of its assumptions. Thus this is a "Marxiological" rather than a Marxist issue. The lead article in that issue, authored by Marek Siemek, questions, besides, the very validity of the term, "dialectical materialism," and considers the division into philosophical materialism as the general philosophy of reality and theory of cognition and historical materialism as the application of instruments of dialectical materialism to the investigation of processes of social development to be a manifestation of typically "Stalinist" thinking. The author states moreover that "the present crisis of Marxism" is to be regarded as a crisis of a theoretical-philosophical nature that moreover is occurring chiefly in the sphere of social philosophy. This crisis is principally reflected in the -- basically intact nowadays -- domination of the schema of the Stalinist doctrine of "dialectical and historical materialism."

In Siemek's opinion, that "Stalinist doctrine" or, essentially, as ensues from his subsequent lines, Marxism itself, "is an outgrowth of a basically fallacious interpretation of the relationship itself between what is 'philosophic' and what 'social'..." Hence ensue major practical consequences

such as "the most tangible manifestation of the present 'crisis,' that is, the theoretical impotence of institutional Marxism in face of problems of political power, its incapacity for not just solving but even properly formulating these problems. This is, according to Siemek, a consequence of the fact that Marx himself regarded state rule as merely a "superstructure" rather than synchronically as an aspect of a "social totality" in which the power holders exercise important functions as part of social differentiation, and that Marx did not take a proper position on Hegel's philosophy of the state. For, in Siemek's opinion, by treating state rule "as an element of the 'superstructure' itself alone... Marx could not bequeath to his disciples and heirs any even moderately lucid and unequivocal formulations regarding these typically 'Hegelian' problems of theory of the state, law, and political power." As a result, according to Siemek, this led to, "...in practice, the subjectivization and instrumentalization of the entire domain of power and governing."

A similar direction is followed by the reflections of Shlomo Avineri, who argues that Marx derogates the role of the state in economic life. Avineri proposes a different, non-Marxian approach to the relationship between the "base" and the "superstructure," on expounding the leading role of many factors of the superstructure, such as religion, the state, etc.

To conclude, knowledge of the genesis and development of Marxism in the history of philosophy is almost entirely absent from the pages of the reviewed issues of STUDIA FILOZOFICZNE, and the few articles formally devoted to "the presence of Marxism in contemporary culture" are actually so worded as to demonstrate either the "unadaptability" of Marxism to that culture or a need for its fundamental restructuring.

Such is the situation as regards the presentation of the history of Marxism by STUDIA FILOZOFICZNE. As for contemporary studies by Polish and foreign Marxists of the philosophical problems of the natural sciences (with the valuable contribution on cosmology by St. Butryn being an exception), theory of cognition, and scientific methodology, their presentation in the periodical is incommensurate with the importance which they have acquired in modern science and the important role they are playing in contemporary social life.

Various objections can also be raised against the 1983 issue devoted to cognitive values. The idea itself of such an issue is laudable; it is its actual nature that evokes reservations. Modern scientific literature often considers the problem of latent or consciously assumed axiological assumptions underlying scientific research and influencing either an assessment of its value from the standpoint of thoroughness of that research or the image of the world that it presents.

This sometimes provides an occasion for propagating all kinds of relativist epistemological theories and agnosticism. A by-product is the confusion of ideological inspirations of the scientist's work with rules for a correct scientific project and with the picture itself of the reality being reproduced by the scientist under the common slogan, "latent axiological assumptions." There is also the confusion of the ideational inspirations which, as Karl Mannheim says, provide a "chance" for a penetrating and more adequate

cognition of reality, with the ideational inspirations which lead to a "false awareness" or even deliberate mystification or deformation of that reality. Thus, that axiological issue of *STUDIA FILOZOFICZNE* could have afforded an opportunity for a penetrating analysis of all these complex questions. Unfortunately, the editors availed themselves of this opportunity only to a small degree. These questions are raised only very diffidently by Editor-in-Chief Prof Dr Habilitatus Michal Hempolinski, in his article, "Truth as the Supreme Cognitive Value," and less diffidently by Prof Dr Habilitatus Seweryn Dziamski in the article concluding that issue, "On the Value of Scientific Cognition." But as a whole the issue is dominated by papers written from theological standpoints, various forms of irrationalism, and relativism of epistemological theories. Also surprising is the fact that an issue devoted to theory of value lacks articles by the eminent Polish axiologists M. Fritzhand, B. Suchodolski, and M. Michalek, who represent the Marxist view of that theory.

Similar reservations are evoked by the contents of a subsequent "monograph" issue published in 1984 on the topic of "Reason--Rationality." Most of the material published in that issue does not correspond with that topic and either argues in favor of major limitations on the potential of human reason, unless aided by "supernatural grace" -- thus explicitly defending a theological point of view that is difficult to reconcile with rationalism -- or presents rationalism and rationality as one of the possibilities of science accepted solely in consideration of some or other nonscientific, purely axiological preferences of scientists. One of the authors even attempts to present "science" and "scientificity" themselves as a "19th century myth" related to positivist "prejudices," while another trumpets praises of the parasciences and all kinds of contemporary irrationalisms as a new "paradigm" of science. The editors might respond that they published the materials of a scientific session at which precisely these attitudes predominated. In accord, but does the editorial staff have to act like a mailbox that receives anything flung into it? And should the materials of that session, or that particular selection of materials from that session, be published precisely in *STUDIA FILOZOFICZNE*?

Similar reflections are evoked by articles published in 1984 and 1985 issues. To be sure, in those years certain positive trends have occurred as regards the selection of themes, with attention paid to problems of linguistic theory, scientific methodology, applications of information theory, and also philosophical problems associated with the development of detailed sciences (theory of culture, psychology, and cosmology).

In addition, the publication during the years 1984-1985 of a number of studies of Polish philosophy in the interwar period, history of modern philosophy, and more recently, philosophy of culture, philosophy of law, aesthetics, and methodological principles of psychology, also represent valuable initiatives.

But tendencies which I regard as unfavorable have also intensified. Problems of Marxist philosophy are almost entirely absent in the 1984-1985 issues of the periodical. I say, "almost," because we do find several articles on so-called neo-Marxism or "Western Marxism," concerning, e.g., the works of Bloch, Habermas, Marcuse, and also Gyorgy Lukacs (the centenary of his birth was in



1985). On the other hand, there were no articles on problems of the development of Marxist philosophy in the USSR and other socialist countries, whereas philosophers in these countries have scored, especially in recent years, signal accomplishments in, among other things, scientific methodology, epistemology, philosophy, natural sciences, applications of cybernetics and information theory to scientific research, theory of social development, ethics, and aesthetics.

There is also a dearth of materials on the latest Marxist philosophy in the West and scientific discussions among Marxists, and lastly, there is an absence of articles -- with a few exceptions such as the articles by J. Borgosz, St. Butryn, W. Mejbaum, P. Madejski, M. Skrzypek -- presenting the accomplishments and research resources of Polish Marxist scientists. On the other hand, greater emphasis has clearly been placed on two currents in contemporary philosophy -- phenomenology and postpositivism, with the latter in its explicitly agnosticist and relativist form (along with the attendant concepts and philosophy of science rejecting the objectivism of scientific research and stressing either the conventional or the axiological nature of that research). Here again what concerns this reviewer is not that the periodical should not publish materials on, e.g., changes in the views of Popper, the concepts of Kuhn, Tomin, or Feyerabend, or the existential philosophy of Kierkegaard, Heidegger, or Jaspers, or the personalists, but that it should adhere to proper proportions in the selection of materials and to a scientific and critical approach from Marxist positions toward various fashionable philosophical concepts. And above all, that the role played by Marxism in contemporary culture and science, in the social life of the socialism-building countries, should be properly taken into account, and that this periodical, which is published on the initiative of the scientific community, should take a critical position toward various kinds of contemporary irrationalist thought.

Lastly, it appears that the policies on book reviews and selection of articles to be published need to be more ordered. The reviews appear to be fortuitously chosen and many important books are overlooked.

1386

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POLITICS

ROMANIA

#### NEW BOOKS ANALYZE CONTEMPORARY RELIGIOUS PHENOMENA

Bucharest ERA SOCIALISTA in Romanian No 8, 25 Apr 86 pp 49-50

[Article by I.N. Rosca: "The Active Role of Scientific-Materialist Education in Forming the New Man"]

[Text] The formation of the new man, characterized not only by high professional competence but also by a wide cultural horizon, a high political and ideological level, and an advanced moral makeup, an active and responsible participant in forging his own future, constitutes one of the essential directions of the strategy established by the 13th Congress of the Romanian Communist Party regarding our country's development now and later. In this regard, as Comrade Nicolae Ceausescu stressed in the report to the 13th party congress, "the multilateral activity of raising the socialist, revolutionary consciousness of all the working people, of firmly combating the various obscurantist, backward outlooks on work and life, will have to be intensified."

Two works published by Politica Publishing House, prepared by a talented staff formed of university teaching personnel, scientific researchers, journalists, and activists of the Union of Communist Youth (UTC), also respond to this important objective established by the party and put among the basic concerns of the Union of Communist Youth--the education of the younger generation in the spirit of the dialectical- and historical-materialist philosophy, of scientific truths. The first one, titled "Intrebari si raspunsuri la probleme de educatie ateista a tineretului" [Questions and Answers on Problems of Atheistic Education of Young People] (Footnote 1) ("Intrebari si raspunsuri la probleme de educatie ateista a tineretului," Politica Publishing House, Bucharest, 1985. Coordinators: Octavian Chetan and Florin Georgescu. Authors: Ion Batlan, Alexandru Boboc, Gheorghe Al. Cazan, Octavian Chetan, Cornelia Cristescu, Georgeta Florea, Florin Georgescu, Simion Ghita, Ion Goian, Octavian Nistor, Vasile Popescu, Gheorghe Vladutescu, and Elena Zamfir), achieves a dialogue with a wide circle of young people in connection with the various aspects of the religious phenomenon, and the second one--"Indrumar pentru educatia materialist-stiintifica, umanist-revolutionara a tineretului" [A Handbook for the Scientific-Materialist, Revolutionary-Humanist Education of Young People] (Footnote 2) ("Indrumar pentru educatia materialist-stiintifica, umanist-revolutionara a tineretului," Politica Publishing House, Bucharest, 1985. Coordinators: Gheorghe Crasnea and Ion Strugariu. Authors: Ana Balasa, Dr Petre Bieltz, Dr Aculin Cazacu, Adina Chelcea, Dr Septimiu Chelcea,

Serban Cionoff, Gheorghe Crasnea, Dr Petre Datculescu, Alexandru Dobre, Dr Georgeta Florea, Dr Florin Georgescu, Dr Dumitru Ghise, Dr Octavian Nistor, Dr Paul Popescu-Neveanu, Ion Strugariu, and Dr Gheorghe Vladutescu)--analyzes the contemporary religious phenomenon and some components of religion, having, as the title also indicates, an evident methodical character for the practical activity of the UTC organizations.

The "Questions and Answers" volume is sensibly structured in three parts. Roughly speaking, the principal explanations given of religion are presented in the first part, with, at the same time, the religious phenomenon, including its specific character in the contemporary world, being analyzed from the positions of Marxist philosophy, the second part deals with the scientific interpretation of religiously distorted natural phenomena, with the moral content of religion, and with the antireligious attitudes present in Romanian scientific and philosophical thought, and the last part refers to the problem of man's emancipation from religion. Taking a detailed look, however, we can say that the aspects discussed are far more numerous and really interesting, some of them being less familiar to the general public.

Besides the thematic diversity, the volume also has appeal because the answers to the questions are thoroughly worked out, convincing, and incisive, inviting a lively, stimulating dialogue. This is also because the authors are not content to show an already familiar movie but often present to us findings of their own research or express with a personal touch certain "classic" ideas. With nearly all the articles having a pronounced original character, we will mention first the ones referring to aspects about which less has been written, such as: religious syncretism, the distinction between religion and religiosity and between freethinking and atheism, "the new religious movements" and religion's influence on categories of young people in the capitalist countries, the reasons for schisms within the same religion, religion as a false reflection and a form of existence, and spiritualism and "dialectical theory."

One incontestable merit of the authors is also that of presenting their ideas not in the form of simple sententious and juxtaposed statements but in a reasoned, consistent way. At the same time, they avoid excessive and needless technicalization of expression, using accessible, clear, and fluid language, close to natural (everyday) language, but without sacrificing the meaning of the strictly necessary technical terms. Theorized as far back as Marx, the accessibility of language constitutes an essential condition for the scientific-materialist education of the masses, of young people, and for the raising of the human consciousness from the level of common sense to the stage of a predominantly theoretical consciousness.

Through the ideas contained and through the modes of expression, the volume has a superior pedagogic character, helping to establish the truth about the various aspects of the religious phenomenon and thus to really understand the relationships between man and nature, between man and society, between man and his fellow creatures.

In the "Handbook," the truth about religion is revealed and theorized in an even more extensive way. The work points out our party and state's position

on religion, the church, and believers under the conditions of the strengthening of the socialist, moral and political unity of the whole populace, the irreducible opposition between revolutionary, socialist humanism and the religious views on man, the Romanian Communist Party's policy of forming the new man with an advanced, scientific-materialist outlook on the world and life, and the ascension of the human condition and the confrontations of values. Starting from the basic theses of dialectical and historical materialism and from our party's view on the problems examined, the authors stress that the recognition of the freedom of conscience and the providing of the conditions for freely practicing the religious consciousness do not also mean the disappearance of the irreconcilable opposition between dialectical and historical materialism and religious ideologies. As a matter of fact, the freedom of conscience means not only the freedom to be a believer but also the freedom to be an atheist. In consequence, with the profound, irreducible opposition between revolutionary humanism and the religious views on man being pointed out, it is stressed that in the work of forming the new man and of multilaterally developing the entire society our party attaches a special importance to forging the socialist consciousness on the basis of dialectical and historical materialism and the struggle against idealistic, mystical, and religious views.

The "Handbook" also contains a number of studies on the crisis of religion in the contemporary world. They offer, first, an explanation and a characterization of the crisis of contemporary religion in its entirety, with the study on the social and political changes produced in the principal contemporary religions and their contradictory implications for the progress of humanity being more noteworthy in this regard. Its authoress states that the social processes and trends generating progress, including socialist revolution and construction and the scope of the scientific and technical revolution, are the ones that triggered the "crisis of religion," acting in the direction of reducing its role under the current conditions. On the other hand, it is argued that the persistence and accentuation of dysfunctional actions and trends, connected mainly with the systemic crisis and the expansion of the contradictions of contemporary capitalism, with the current international economic and political order, and with the speedup of the arms race, are causing the maintenance or even a certain growth of the influence of the various religious views. At the same time, it is specified that, under the above-mentioned contradictory social conditions, some religions incline toward "modernization" and others toward conservatism, while a large group swings between the two extremes. The tendency toward "modernization" presupposes the attempt at a *modus vivendi*, at a "conciliation" of religion with the innovative data of science and social practice, and the conservatism presupposes isolation in dogmatics and hostility toward the gains of science and technology or toward active participation in social life, in general, and in progressive movements, in particular. Regarding the attempts of religions at scientific or political "modernization," the study concludes that they too remain, in essence, limited. Centered on belief in the supernatural, the religions that attempt a "conciliation" with science do not manage to forgo fideism, admitting at most the equality of faith and reason, and the ones that criticize the bourgeois society, opposing to it another social model, preserve the illusion that the truly human society could be achieved by moral and religious means, through Christian love, and not through social revolution.



In the studies devoted to the analysis of the contemporary sectarian phenomenon, the harmfulness of religious sects and, in consequence, the necessity of firmly combating sectarian ideas and practices, as well as any mystical or idealistic influences, are pointed out. The analyzes made distinguish the specific causes of the appearance and influence of the new sects among categories of young people in the capitalist countries and the characteristics of the new sects, including their reactionary political function and their anti-human character of manipulating and crippling the human personality by various means, especially psychological ones. The authors make a big contribution to the characterization of illegal sects or so-called "scientific" sectarian orientations. The absolutely logical conclusion that is reached is that only the expansion of the horizon of culture, the thorough study of the scientific knowledge about nature, man, and society and of the dialectical- and historical-materialist principles, and, of course, positive involvement in social and historical practice can reduce the sphere of influence and manifestation of religious mysticism, permitting the free and multilateral development of the human personality.

Another group of studies deals with the incompatibility between the norms and principles of socialist and communist ethics and moral and religious precepts, with the laical and humanistic essence of Romanian folklore, and with logic's role in the rejection of religious irrationalism. We feel that such research makes a big contribution to bringing out the fact that religion has a complex content, which, along with the cognitive elements (of false knowledge), also includes moral, artistic, and logical components. Hence, the necessity that, in the process of atheistic education, of man's emancipation from religion, a complex strategy be applied, including not only the promotion of scientific knowledge and of philosophical explanation but also the formation of new moral attitudes and of a new aesthetic outlook or the logical education of thinking.

However, the work's evident methodical character of a "handbook" is given expressly by the studies with which it ends. The system of methodical action utilized in the atheistic education of young people, the results of the sociological and psychological research on religion that are useful for education in this field, the experience, and the forms and methods used by the organizations of the Union of Communist Youth within the system of atheistic education are presented there.

We could not conclude our considerations without pointing out the fact that the volume also contains an extremely useful, sufficiently comprehensive selective bibliography, compiled on the basis of specialized works.

Through the contributions made to clarifying the religious phenomenon, including less familiar aspects of contemporary religious ideology, and through their methodological and applicative features, the works to which we have referred constitute a valuable instrument in the scientific-materialist, revolutionary-humanist education of the young people in our homeland.

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